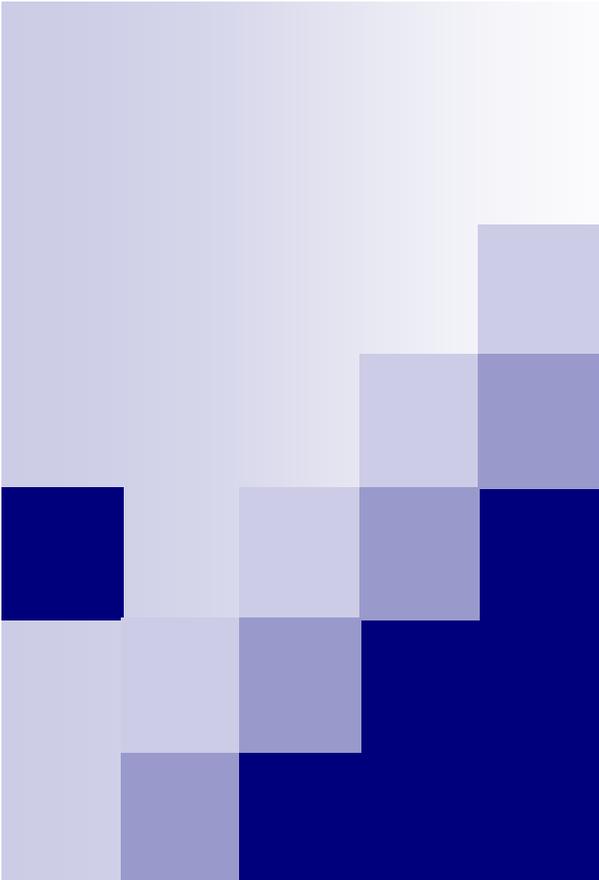


AQS Introductory Course for New Users – Load

AQS Conference, June 8, 2010
Colorado Springs, CO



AQS Overview



We Will Cover

- What AQS Is
- Where it Comes From
- The Types of Information it Contains
- How it Stores this Information

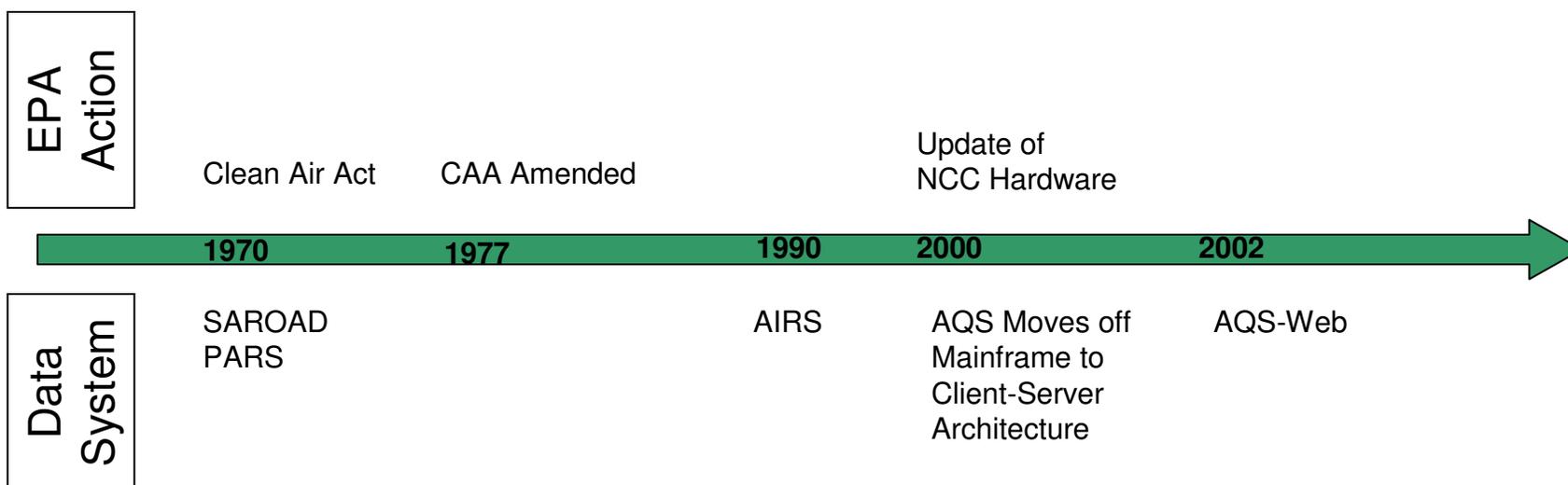


What is AQS?

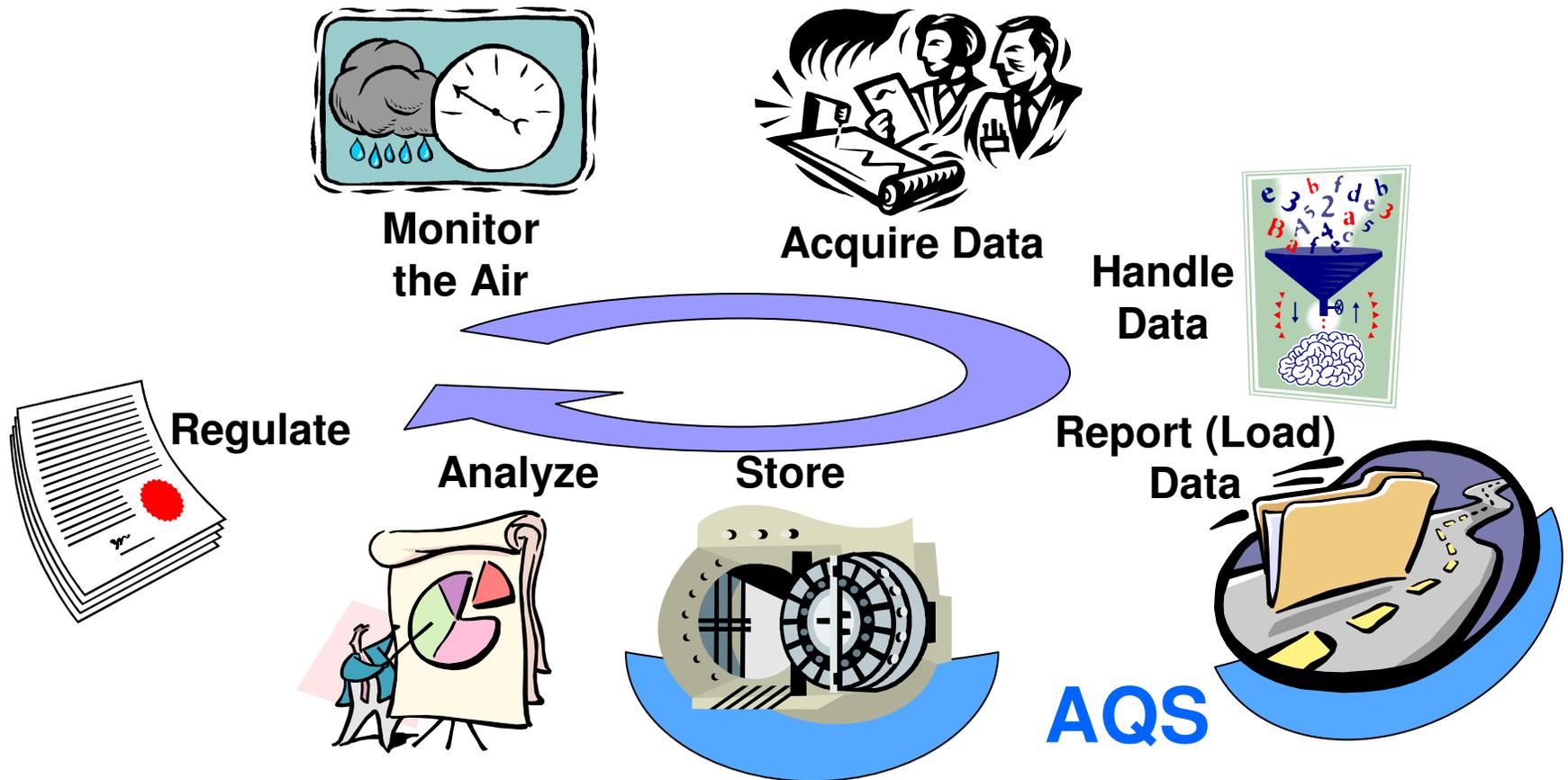
- EPA's Oracle Database Application used to store Ambient Air Quality Data
- Centralizes the Location of Data
 - Used to Determine if areas are Meeting Air Quality Standards
 - Used by Universities and Institutes to Perform Health Studies

Origins of Air Regulations & AQS

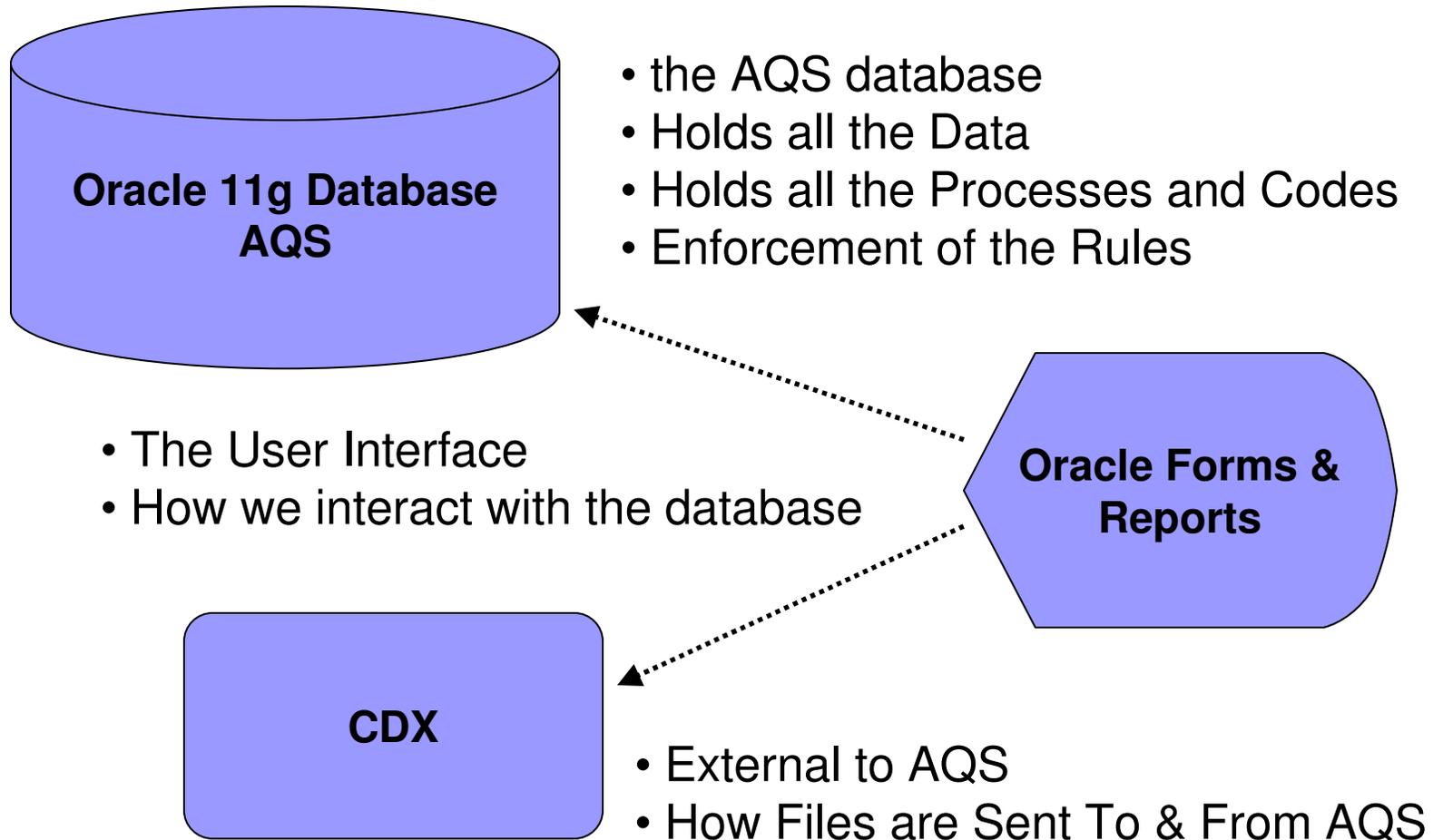
- **SAROAD** (1970 – 1985) - - *Storage And Retrieval Of Air Data* - - Created in Response to the 1970 Clean Air Act
- **AIRS – AQS** (1985 – 2000) - - *Aerometric Information Retrieval System* - - Stored Ambient Air Quality Data (Air Quality Subsystem) as well as Point Source Emission Data
- **AQS** (2000 – Present) - - *Air Quality System* - - Contains Ambient Air Quality Data and Quality Assurance Information



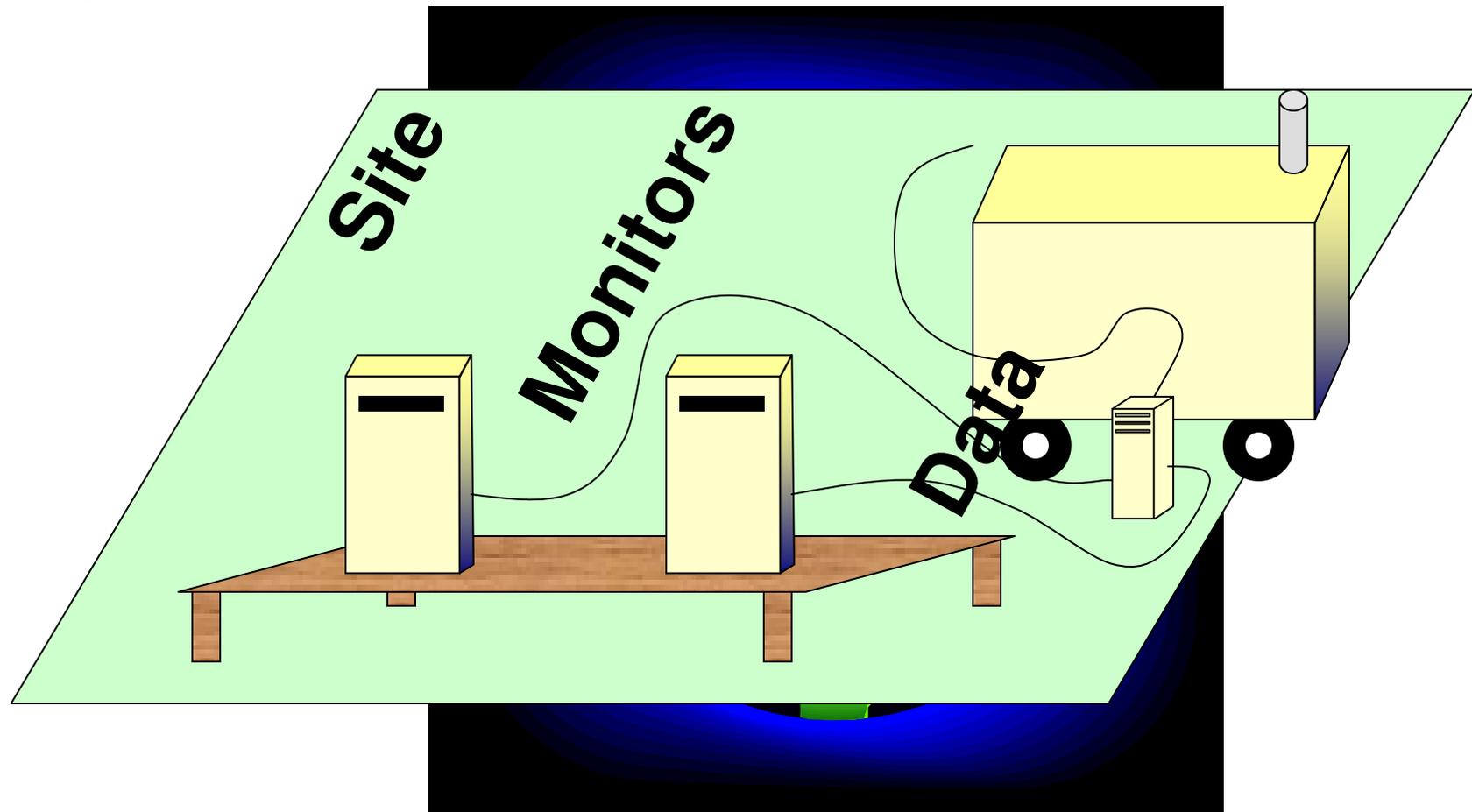
How Does AQS Fit in the Big Picture?



What makes up what we call “AQS”?



Types of “Core” Data in AQS





Information in AQS

The AQS database can be considered to have four fundamental types of data:

- **Sites**

Information about monitoring locations

- **Monitors**

Information about how measurements are taken

- **Detail Data**

Measurements, Summaries, and QA information

- **Reference Data**

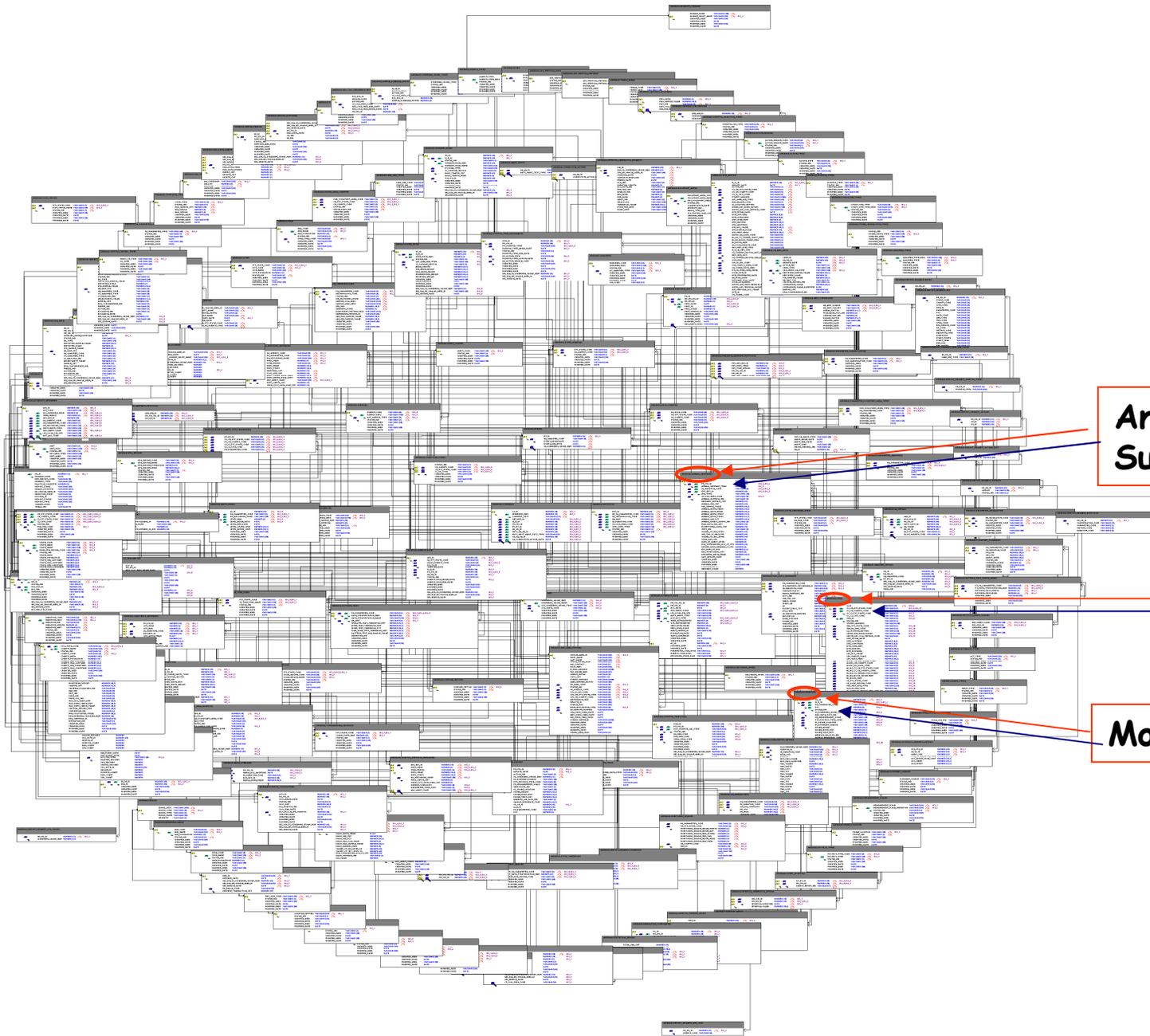
Extra information about the data in AQS

Codes used to identify States, Counties, Tribal Lands, Pollutants, etc.



AQS Data at a Glance

Type of Data	# of records
Raw data (2005)	81,000,000
Site	18,000
Monitor	227,000
Quarterly Summary (2005)	304,000
Annual Summary (2005)	115,000
Precision (2005)	197,000
Accuracy (2005)	18,000

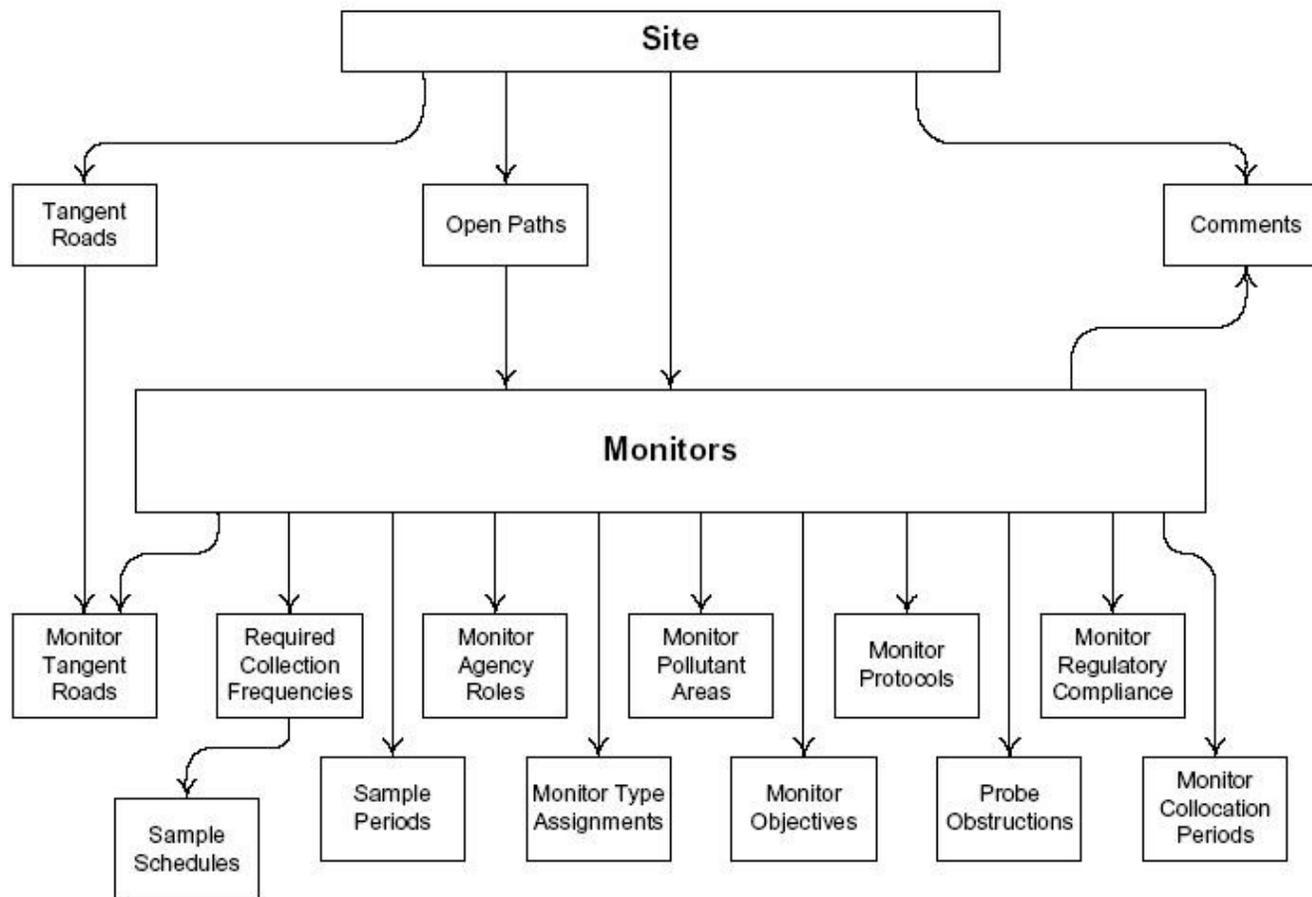


Annual Summaries

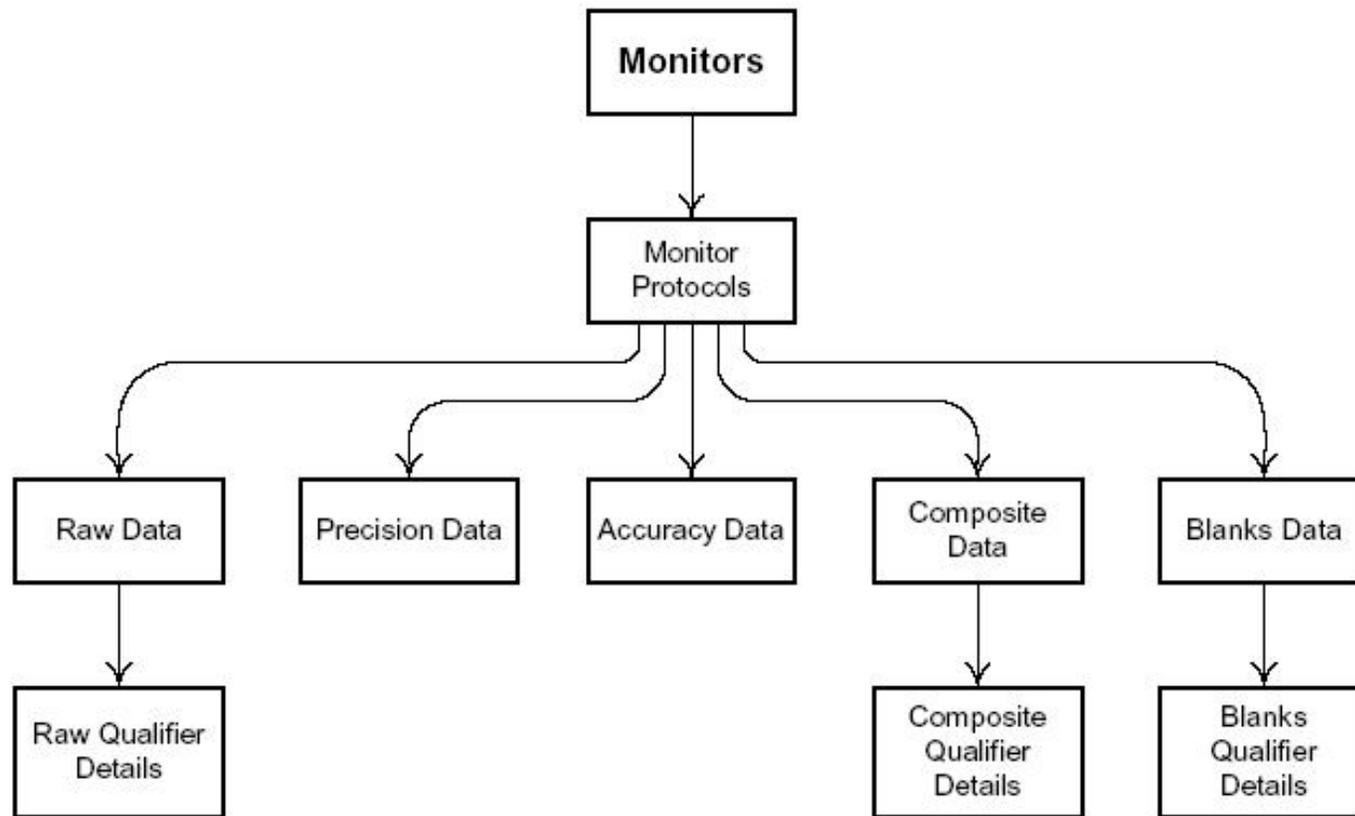
Sites

Monitors

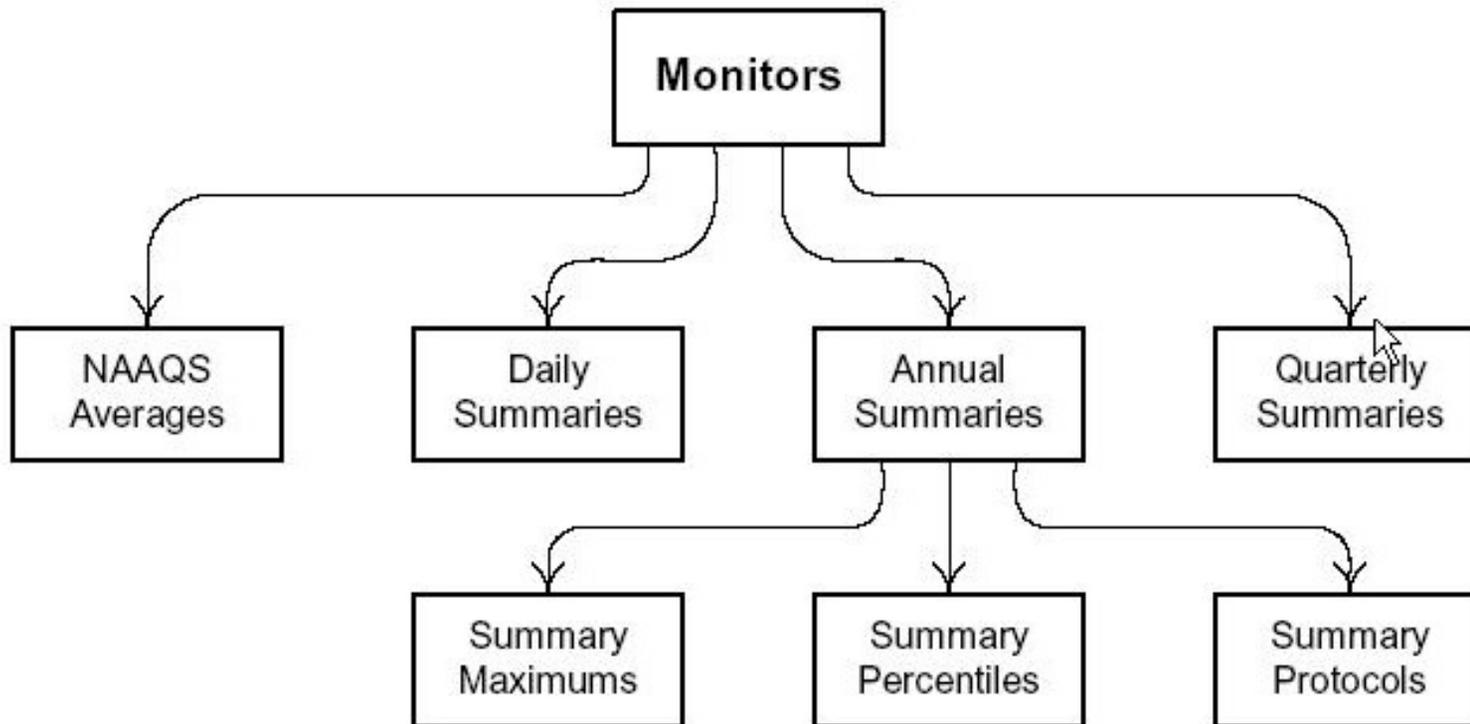
AQS Site and Monitor Data Model



AQS Data Model – Sample Data



AQS Data Model – Summary Data





AQS Reference Data

- Lots of “Extra” Information about the Data in AQS
 - Codes used for Descriptions
 - Standard Codes Used where Available
- Codes are Used to Identify
 - States, Counties, Tribal Lands
 - Pollutants, Sample Lengths
 - etc...



Examples of Commonly Used Codes

■ Parameter Codes

- Ozone = 44201
- NO₂ = 42602
- NO₂ = 42401
- CO = 42101
- PM_{2.5} = 88101
- Lead = 14128

■ Units of Measure

- 001 = μg/m³
- 007 = Parts per Million
- 008 = Parts per Billion

■ Collection Frequency Codes

- 1 = Every Day
- 3 = Every 3rd Day
- 6 = Every 6th Day

■ Duration Codes

- 7 = 24 Hours
- 1 = 1 Hour
- W = 8-Hour Running Avg.*
- X = 24-Hour Block Avg.*
- Y = 3-Hour Block Avg.*

* AQS Generated Durations



Putting The Core & Reference Information Together

- An Ozone (44201) Monitor in Wake County(183), North Carolina (37) May be Represented as
 - 37-183-0001-44201-1
- A PM10 (81102) Monitor for the St. Regis Band of Mohawk Indians of New York (007) May be Represented as
 - TT-007-1234-81102-1



AQS changes to meet regulatory needs

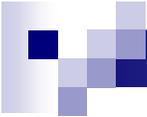
■ Exceptional Event Rule (EER)

- The Federal Regulations (40 CFR Part 50.14) allow Ambient Air Quality Measurements that are Exceedances or Violations of the National Ambient Air Quality Standards (NAAQS) that are **caused** by an “Exceptional Event” to be excluded from Attainment demonstrations.
- Was implemented in AQS in March 2010
- Refer to *AQS Exceptional Event Tutorial*



AQS Process for EER

- 1) Reporting Agency identifies data affected by an exceptional event
- 2) Reporting Agency flags the data in AQS (online or batch)
- 3) Reporting Agency enters the Exceptional Event Description in AQS (must be done online)
- 4) Reporting Agency associates the data in AQS with the Exceptional Event (must be done online)
- 5) EPA Regional Office either concurs or denies exclusion
- 6) **Affects AQS Summaries & Reports**



AQS - Exceptional Data Types

- AQS computes summaries (daily, quarterly, and annual) that either *include* or *exclude* the flagged data and labels each summary with an “Exceptional Data Type”

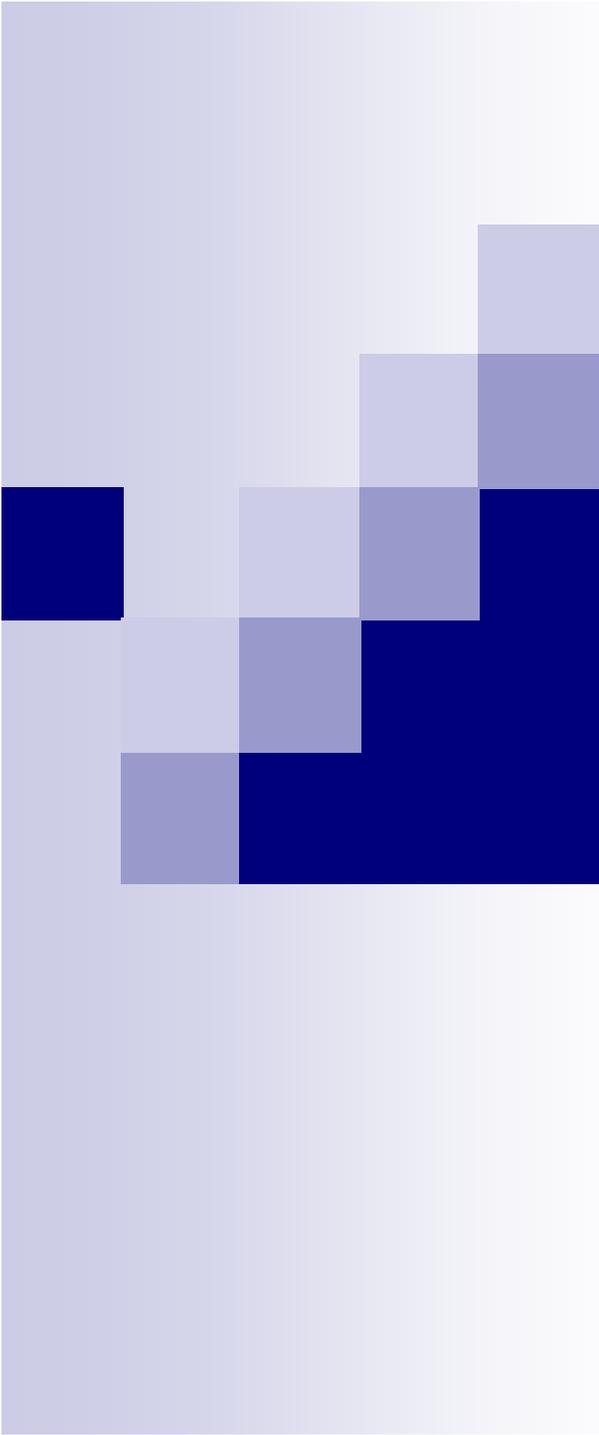
<u>Exceptional Data Type</u>	<u>Result</u>
0	No data has been flagged
1	The summary excludes all flagged data
2	The summary does not exclude any data
5	The summary excludes regionally concurred flagged data

- Why do we bring this up here? You must be aware of these different summaries when you do your retrievals!

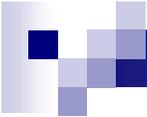


Put it into practice - Exercise 1.1

1. Name the 4 Categories of Data in AQS:
2. How do you Uniquely Define a Site in AQS? How About a Monitor?
3. What Would a Summary Record with a Duration Code of “W” and a Parameter Code of “44201” Represent?



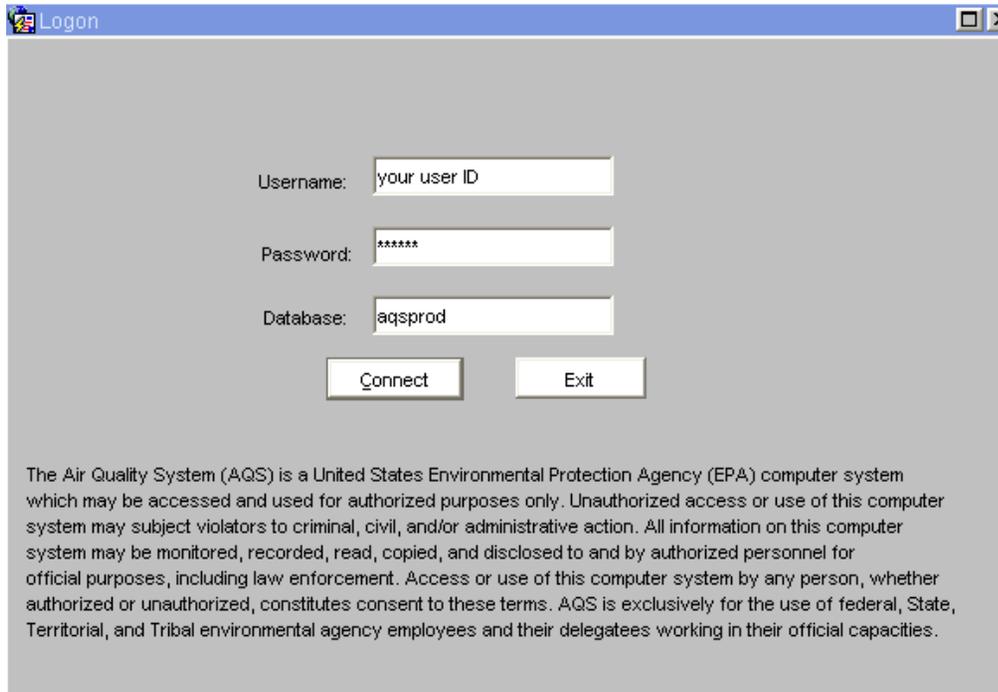
AQS User Interface – getting to AQS & getting around in AQS



Access AQS – Registration & start-up

- Registration process
 - Need user ID and password
<http://www.epa.gov/ttn/airs/airsaqs/registration.htm>
- Read-only access is granted to all
- Update access is available only to authorized users
- AQS Web Application
 - Initial setup required
<http://www.epa.gov/ttn/airs/airsaqs/aqsweb>

Access AQS



The screenshot shows a Windows-style window titled "Logon". It contains three input fields: "Username:" with the text "your user ID", "Password:" with "*****", and "Database:" with "aqspod". Below these fields are two buttons: "Connect" and "Exit". At the bottom of the window, there is a paragraph of text: "The Air Quality System (AQS) is a United States Environmental Protection Agency (EPA) computer system which may be accessed and used for authorized purposes only. Unauthorized access or use of this computer system may subject violators to criminal, civil, and/or administrative action. All information on this computer system may be monitored, recorded, read, copied, and disclosed to and by authorized personnel for official purposes, including law enforcement. Access or use of this computer system by any person, whether authorized or unauthorized, constitutes consent to these terms. AQS is exclusively for the use of federal, State, Territorial, and Tribal environmental agency employees and their delegates working in their official capacities."

Username = 3-character ID
obtained through the
registration process

Password = your personal
password

Database = "aqspod"

Today only,

Username = 3-character ID provided by instructor

Password = provided by instructor

Database = "aqstrng"



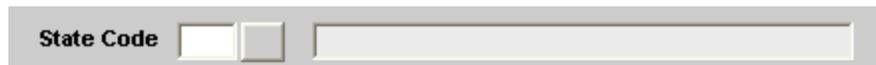
User Interface Parts

- Forms: Presents information to user and accepts input.
- Reports: Presents formatted data for printing (reports) or input by other software (workfiles)
- Menus: Allow selection of AQS Form or execution of specific action
- Icons: Allow execution of a specific action

Forms:

- Forms are the primary way that you interact with AQS.

- They provide a way for you to enter data:



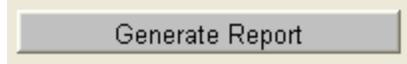
A screenshot of a web form with a label "State Code" followed by an empty text input field and a dropdown menu.

- They display previously entered data:



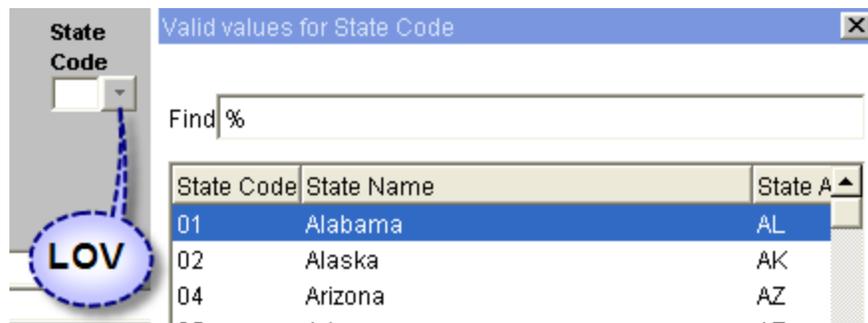
A screenshot of a web form showing the "State Code" field filled with "37" and the "State Name" dropdown menu displaying "North Carolina".

- They may have buttons to allow you to request actions:



A rectangular button with the text "Generate Report" centered on it.

- They often have Lists of Values (LOVs):



A screenshot of a "Valid values for State Code" dialog box. It features a search field with "Find %" and a table of state codes and names. A blue circle with "LOV" is overlaid on the dialog.

State Code	State Name	State A
01	Alabama	AL
02	Alaska	AK
04	Arizona	AZ
...

Form Types (1)

- Some forms are designed to display only one record at the time:

Maintain Site (National Air Data Group)

Basic Site Data | Additional Site Data | Agency Roles | Tangent Roads | Open Paths | Comments | Primary Monitor Periods

Site Identification

State Code: 37 North Carolina
County Code: 183 Wake Site Id: 0002 Status Ind: P

User Coordinates

Horizontal Datum: NAD27 Latitude: 35.788611 Longitude: -78.678889
UTM Zone: UTM Easting: UTM Northing: Lookup Geography

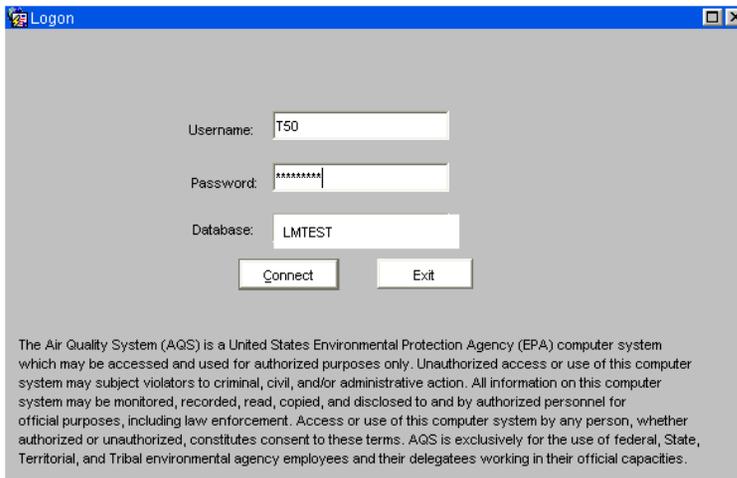
Standard Coordinates: Datum: WGS84 Latitude: 35.788701 Longitude: -78.678628

Horizontal Method: 027 UNKNOWN
Horizontal Accuracy (Meters): 10 Source Map Scale (Non-GPS): 24000
Vertical Measure (Meters): 111 Vertical Accuracy (Meters): 10 Vertical Datum: UNKNOWN
Vertical Method: 000 UNKNOWN

Street Address: 1914 PARK DR CAMERON VILLAGE
Land Use Type: RESIDENTIAL Location Setting: URBAN AND CENTER CITY
City Code: 55000 Raleigh
Urban Area Code: 6639 RALEIGH, NC
AQCR Code: 166 EASTERN PIEDMONT
Site Established Date (YYYYMMDD): 19720101 Time Zone Name: EASTERN

Check Completeness Create Monitor

AQS Login Form

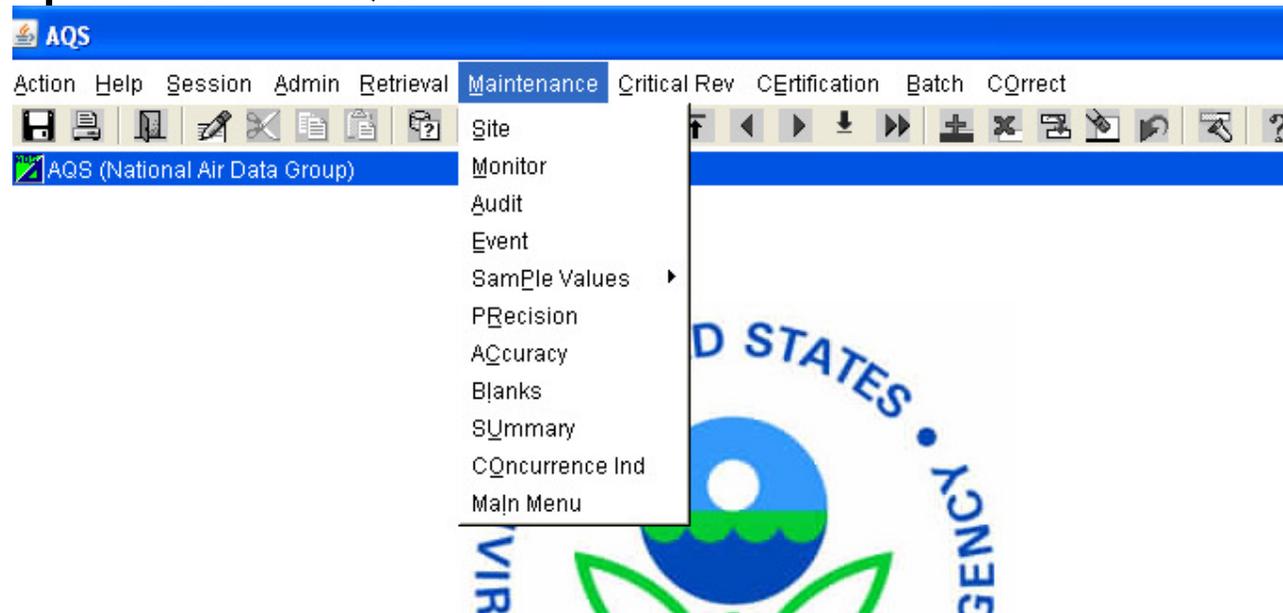


The screenshot shows a window titled "Logon" with a blue title bar. Inside the window, there are three input fields: "Username:" with the text "T50", "Password:" with masked characters "*****", and "Database:" with the text "LMTEST". Below these fields are two buttons: "Connect" and "Exit". At the bottom of the window, there is a block of text providing a disclaimer about the Air Quality System (AQS) and its use by authorized personnel.

The Air Quality System (AQS) is a United States Environmental Protection Agency (EPA) computer system which may be accessed and used for authorized purposes only. Unauthorized access or use of this computer system may subject violators to criminal, civil, and/or administrative action. All information on this computer system may be monitored, recorded, read, copied, and disclosed to and by authorized personnel for official purposes, including law enforcement. Access or use of this computer system by any person, whether authorized or unauthorized, constitutes consent to these terms. AQS is exclusively for the use of federal, State, Territorial, and Tribal environmental agency employees and their delegates working in their official capacities.

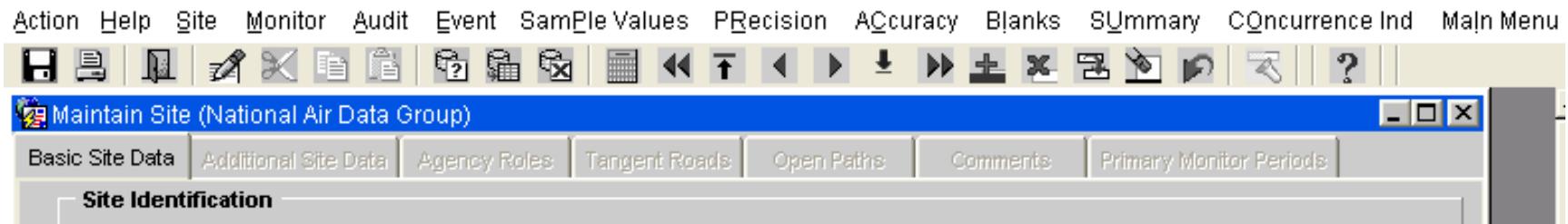
AQS Menus (1)

- Allow you to access specific AQS Forms
- The AQS Main Menu allows access to all forms that are part of AQS:



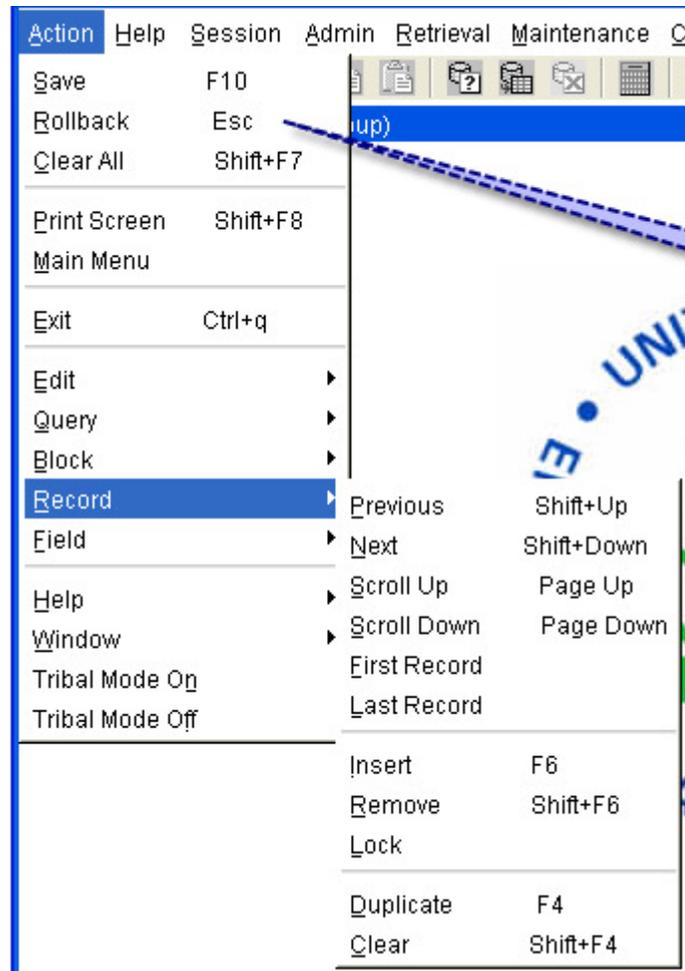
AQS Menus (2):

- Once a form has been selected, a menu specific to that form is displayed:



AQS Menus (3):

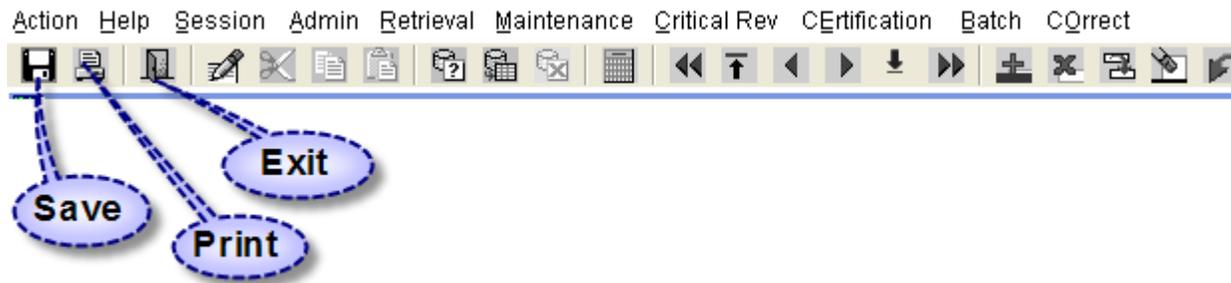
- The Action Menu lets you request specific operations:



Notice
Shortcut
Keys

AQS Icons:

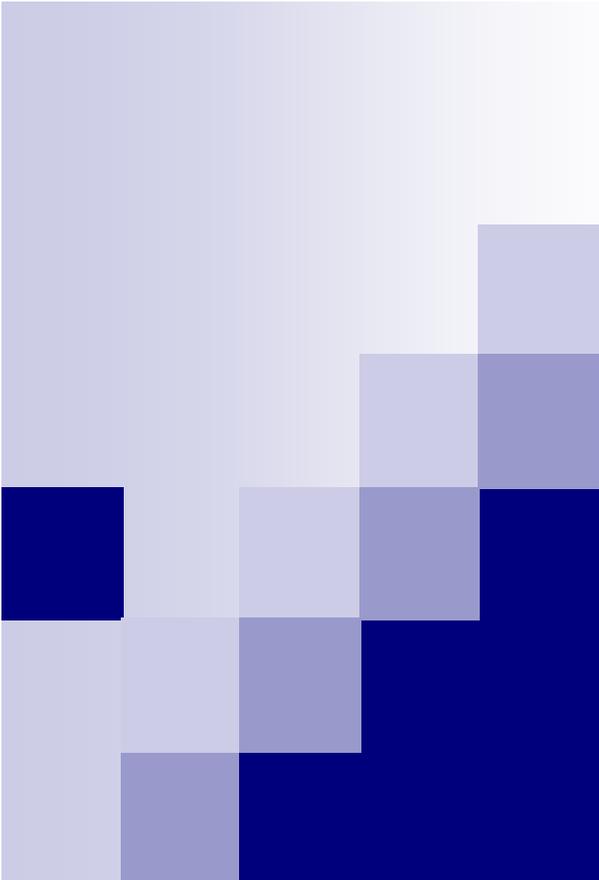
- AQS Icons allow you to request actions from the Action Menu:



- (Other icons will be covered later)

Logging off AQS

- Select Exit from the Action Menu or
- Click on the Exit Icon  or
- Click on the red  at the top right corner of the window.



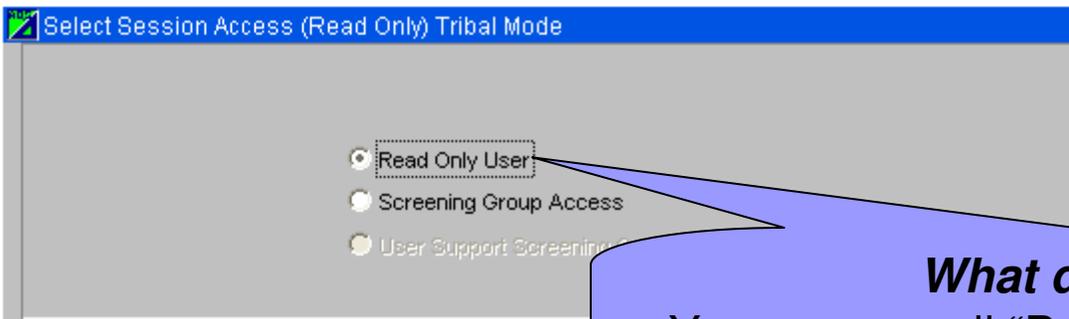
Browsing Data in AQS



What Can I Browse?

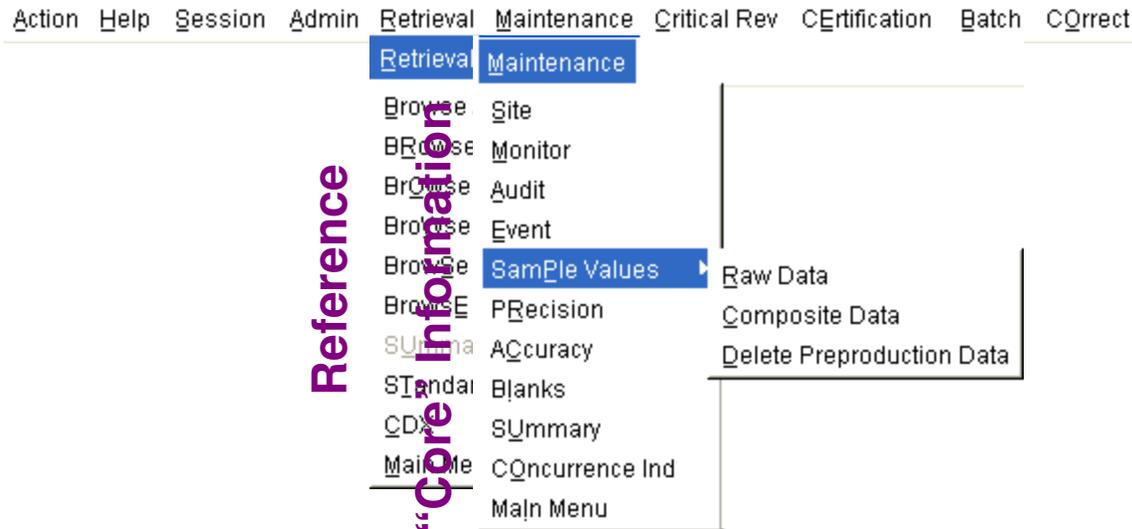
- Reference Information
 - Codes Used in the System
 - Seasonal Definitions
- Data Supplied to AQS in Small Groups of Information
 - Site
 - Monitor
 - Sample Data
 - Summary Data

Where Do I Start?



What does this Mean?

- You can see all “Production” data from Anyone
- You cannot change any data



Reference
“Core Information”



What's the big picture?

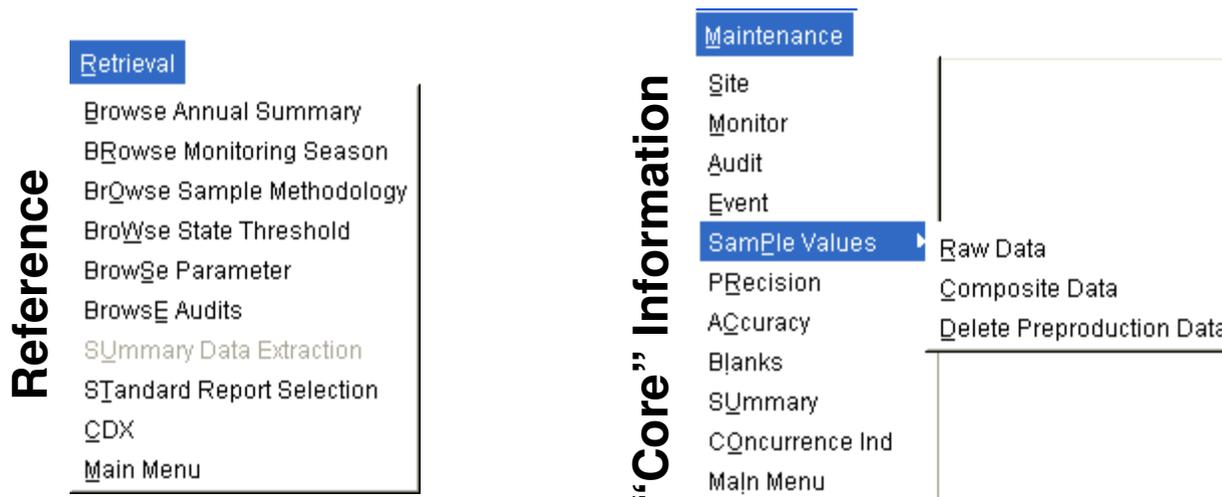
- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters
- Execute the Query
- Scroll Through the Records

How Do I Do That?

- Select the Type of Data you Want
- Specify Filters to limit the Records you get

Tribal Code State Code County Code Site ID Parameter Code POC

- Execute the Query 
- Scroll Through the Records



Forms Terminology

Tabs

Browse Annual Summary (Read Only) Tribal Mode

Monitor | **Summary Maximums**

Annual Summaries

Tribal Code [] State Code [01] County Code [071] Site ID [0020] Parameter Code [44201] POC [2]
 Summary Year [2005] Duration Code [WV] EDT [0]

Obs Lt Half Mdl [] Observation Pct [0] Geom Std Dev []
 Arith Std Dev [] Geometric Mean [] Arithmetic Mean []
 Min Sample Value [0.017] Observation Cnt [603] Sum Method Cnt [] Direct Entry Ind [N]
 Criteria Ind [N] Null Data Obs Cnt [] Cer Ind [] Valid Day Cnt [0]
 Exp Data Cnt [] Val GT Pri Std [0] Val GT Sec Std [0] Est Days GT Std []
 Days GT Alert Lvl [] Non Overlap GT [] Miss Day LT Std [0]
 Req Mon Cnt [245] Weighted Mean [] Ans Type [CPS]

Summary Protocols

Mp Id [] Coll Freq Code [] Comp Type [] Alt Mdl []
 Parameter Code [] Parameter Desc []
 Method Code [] Coll Desc []
 Anal Desc []
 Duration Code [] Duration Desc []
 Rep Unit [] Rep Unit Desc []
 Std Unit [] Std Unit Desc []

Enter a State FIPS code that identifies one of the 50 states or other countries.
 Record: 25/?

Blocks

**Record w/
Focus**

Fields

Records

Monitor | Summary Maximums

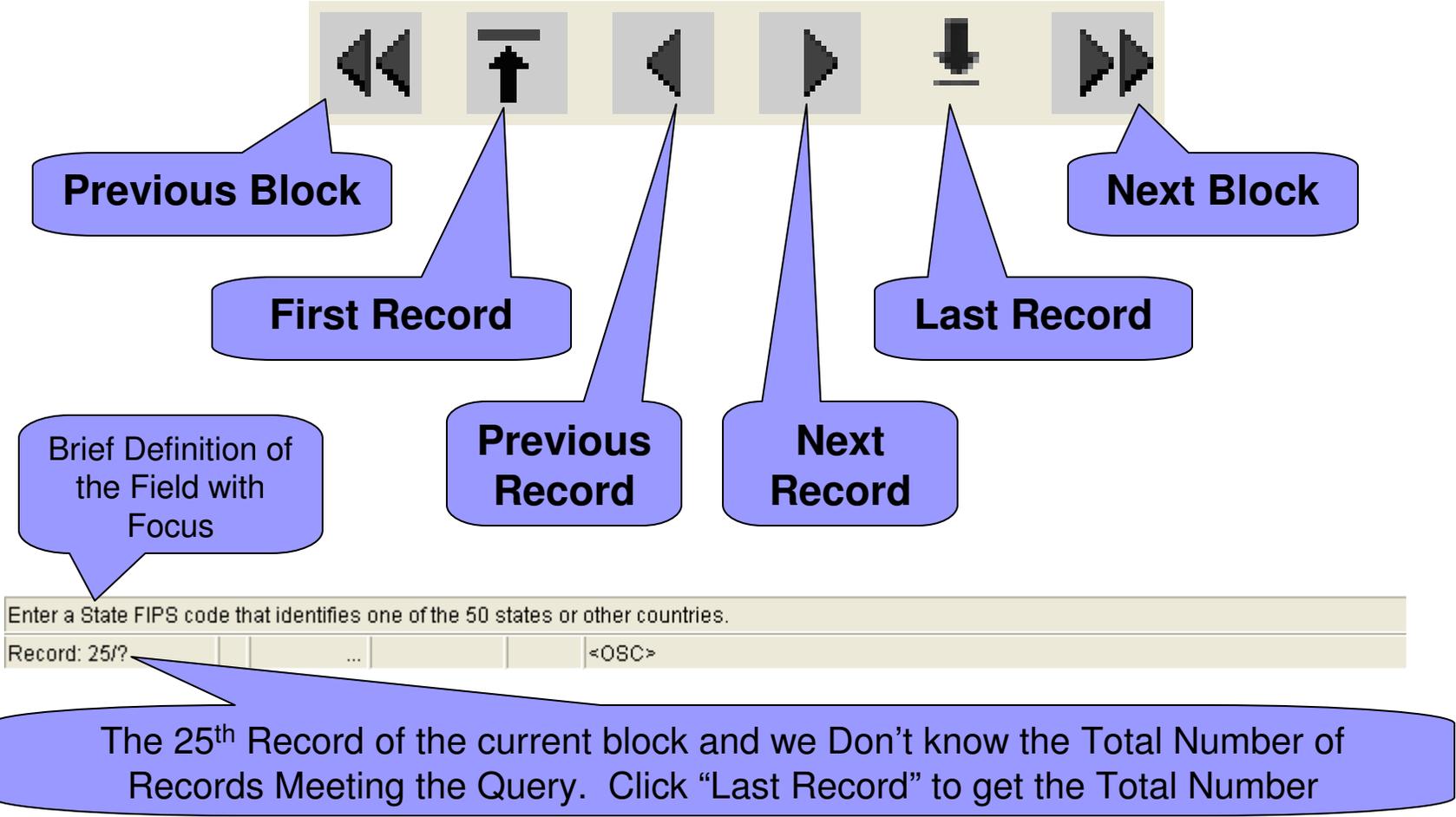
Summary Maximums

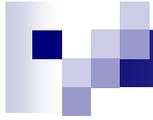
Max Level	Max Sample Value	Max Coll Date
1	788	20060306
2	787	20060303
3	774	20060309
4	768	20060126
5	768	20060219

Summary Percentiles

Percentile Num	Percentile Sample Value
10	753
25	754
50	757
75	763
90	767

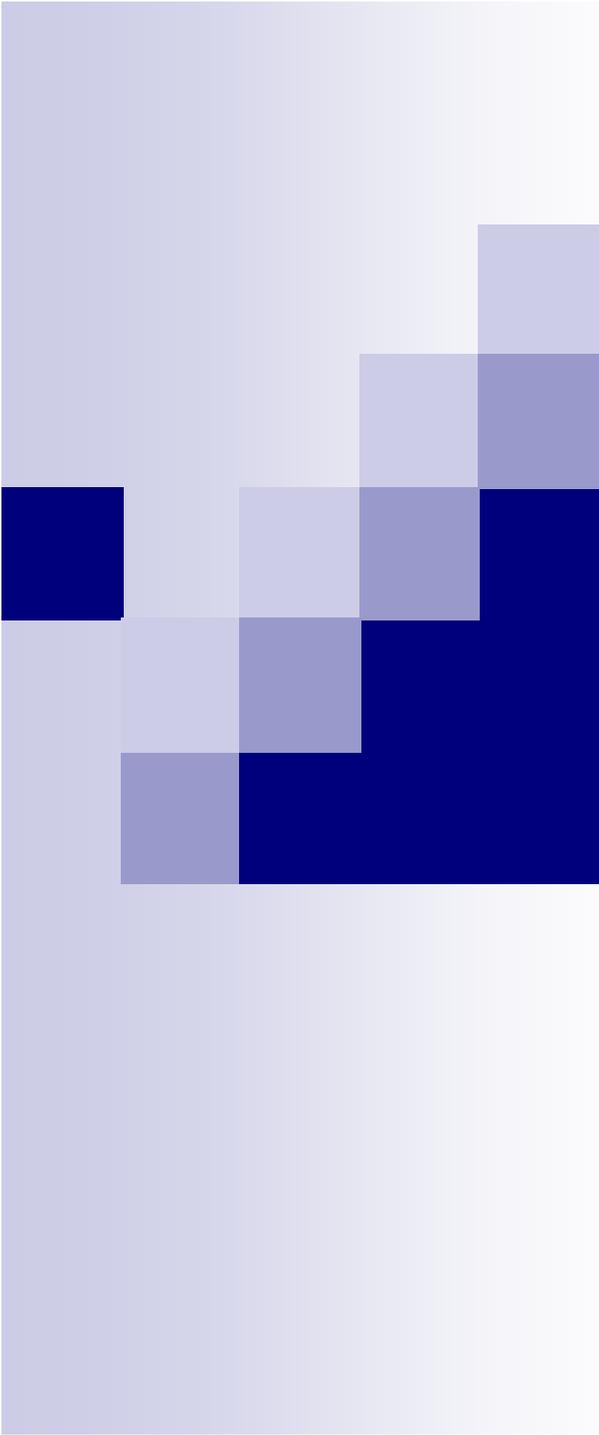
Form Navigation





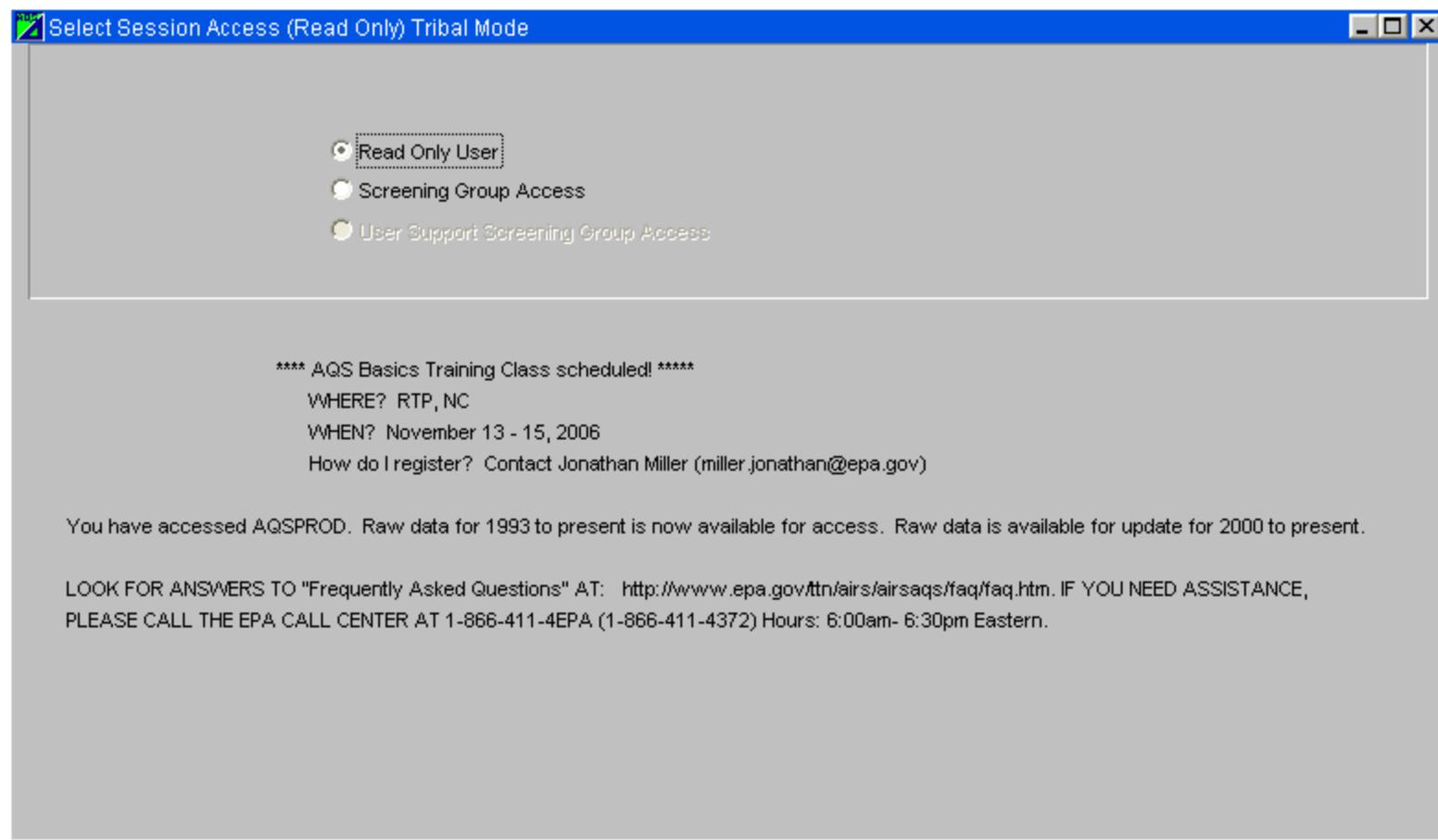
Put it into practice

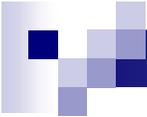
- Do Exercise 1.3



Read-Only vs. Screening Group Access

I've Logged On . . . Now What?





What is the Difference Between “Read Only” & Screening Group Access?

Read Only

- Allows you to Look at Any Data That has Been Deemed “Ready for the Public”
- You Cannot Change Any Data as “Read-Only”

Screening Group

- Allows You to Look at Only the Data You Own (Whether it is Ready for the Public or Not)
- Allows You to Change Any Data That You Own

Types of Access Allowed by Session Type

Menu Item	Type of Access		
	Read Only	Screening Group	Admin
Action (Any Item)	✓	✓	✓
Help (Any Item)	✓	✓	✓
Session	✓	✓	✓
Admin – Security	✓	✓	✓
Admin – All Other Options	✗	✗	✓
Retrieval (Any Item)	✓	✓(Extra Reports)	✓
Maintenance (Any Item)	✓	✓ (Can Update)	✓
Critical Rev (Any Item)	✗	✗	✓
Certification (Any Item)	✗	✗	✓
Batch	✗	✓	✓
Correct (Any Item)	✗	✓	✓



Screening Groups

- Defines What Group Owns a Monitor
- Only One Group Can Own a Monitor
- Only the Data Owner Can Change Data for This Monitor
- Users Are Assigned to One or More Screening Groups
- You Must Select a Screening Group in the Session If You Want to Change Data



In this Class....

- Everyone Has Their Own Screening Group
 - Everyone has their own set of monitors that they can change
 - “TRAININGGROUPxx”, where “xx” are the Last Two Digits of Your Training ID



Status Of Records

- “P” = Production Status
 - Can be Seen by Everyone
- “S” = Statistically Evaluated
 - Only for Raw Data
 - Only viewable by the Data Owner
- “R” = Relationally Valid
 - Only for Raw Data
 - Only Viewable by the Data Owner
- “F” = Field Level Error
 - Something Needs to be Fixed Before the Record is “Production Status”
 - Can Only be Seen / Changed by the Data Owner

Choosing “Read Only” or “Screening Group” Access

- Upon login
- Or, anytime during your session

□ Go to “Main Menu”

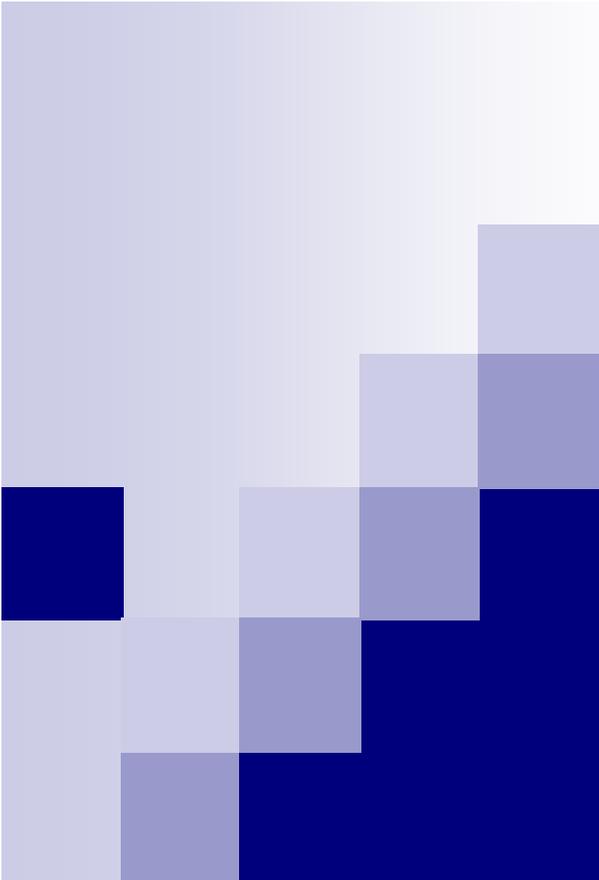
Action Help Site Monitor Audit Event Sample Values Precision Accuracy Blanks Summary Concurrence Ind **Main Menu**



□ Then “Session”

Action Help **Session** Admin Retrieval Maintenance Critical Rev Certification Batch Correct





Updating Data On- Line



What Can I Maintain On-Line?

Data Supplied to AQS in Small Groups of Information

- Site
- Monitor
- Sample Data
- Precision & Accuracy Data
- Summary Data
- Comments

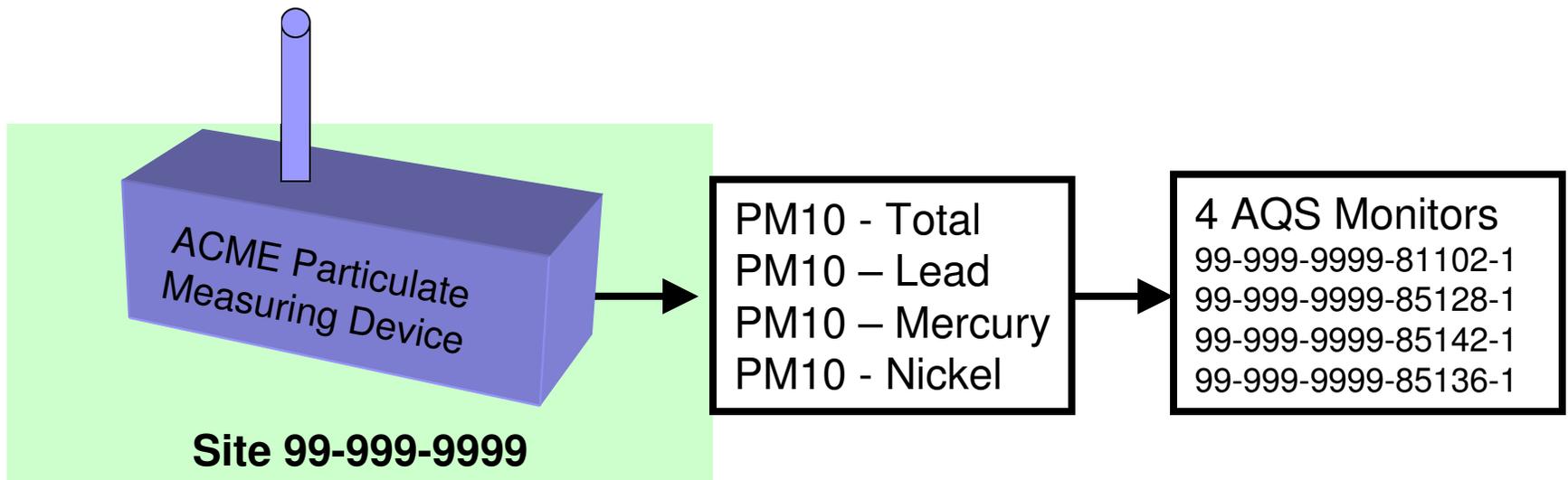


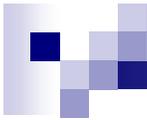
Screening Groups

- Main Security Mechanism in AQS
- You Have a List of Screening Groups To Which You Have Access
 - Different Levels of Access Possible
 - Access Defined at the Time You Get Your User ID. Can Be Changed If Needed.
- A MONITOR Can Only Be “Owned” by One Screening Group

Monitor

- In AQS, A Monitor Refers To a Sampling For a Single Item At a Site... Not to a Measuring Device!





Where To Go From Here

Action Help Session Admin Retrieval **Maintenance** Correct

Site
Monitor
Audit
Event
Sample Values ▶ Raw Data
Precision Composite Data
Accuracy Delete Preproduction Data
Blanks
Summary
Concurrence Ind
Main Menu

New Options Available!!



What's the Big Idea?

- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters
- Execute the Query
- Modify the Records as Needed

How Do I Do That?

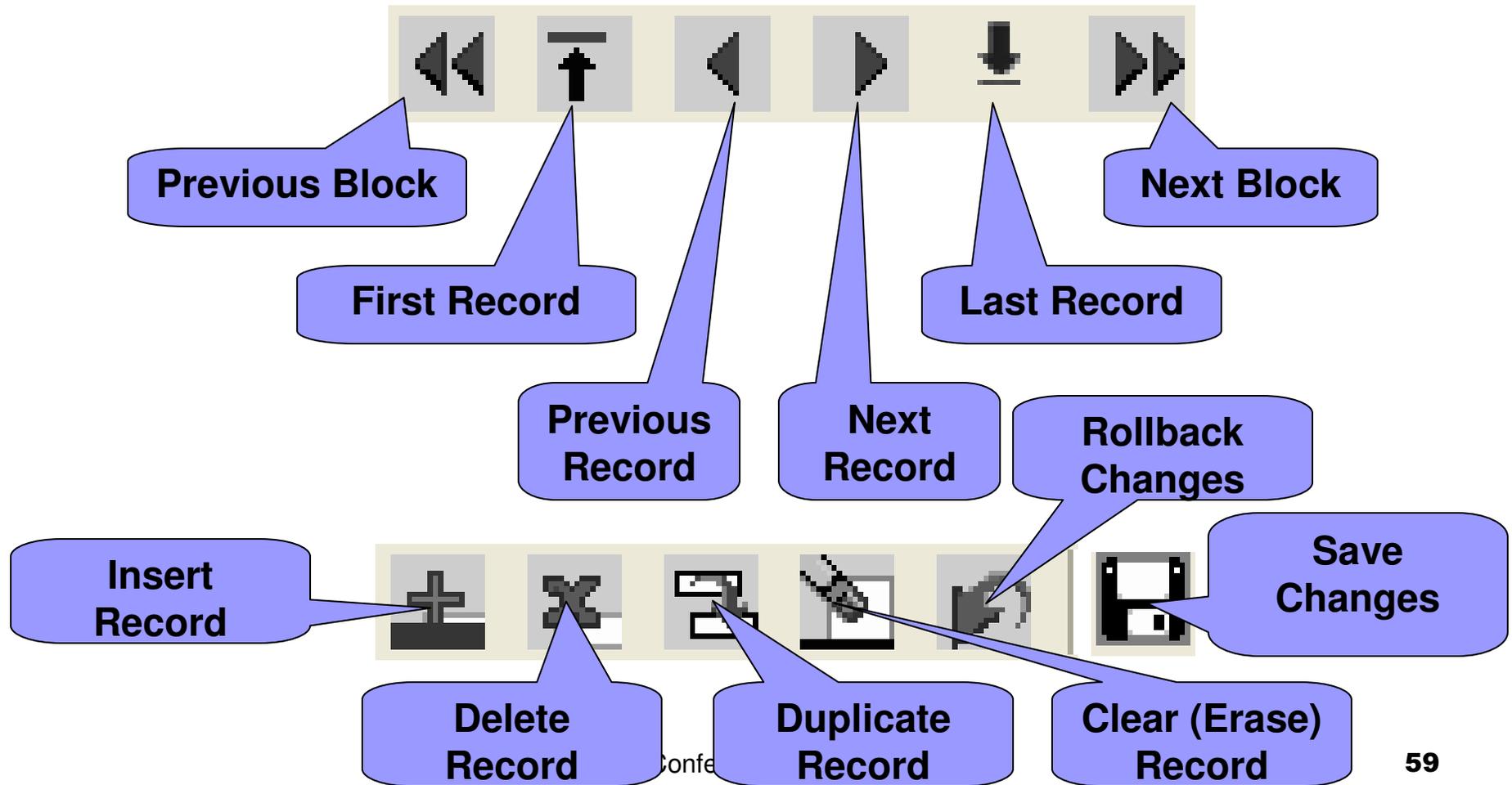
- Select the Type of Data you Want
- Get Only the Records You Need by Specifying Filters

Execute the Query

The screenshot shows a query interface with several filter fields: Tribal Code, State Code (01), County Code, Site ID, Parameter Code (44201), and POC. A dropdown menu is open, listing options: Maintenance (highlighted), Site, Monitor, Audit, Event, Precision, Composite Data, Accuracy, Delete Preproduction Data, Blanks, Summary, Concurrence Ind, and Main Menu.

- Scroll Through the Records, Only the Records Needed

Form Navigation





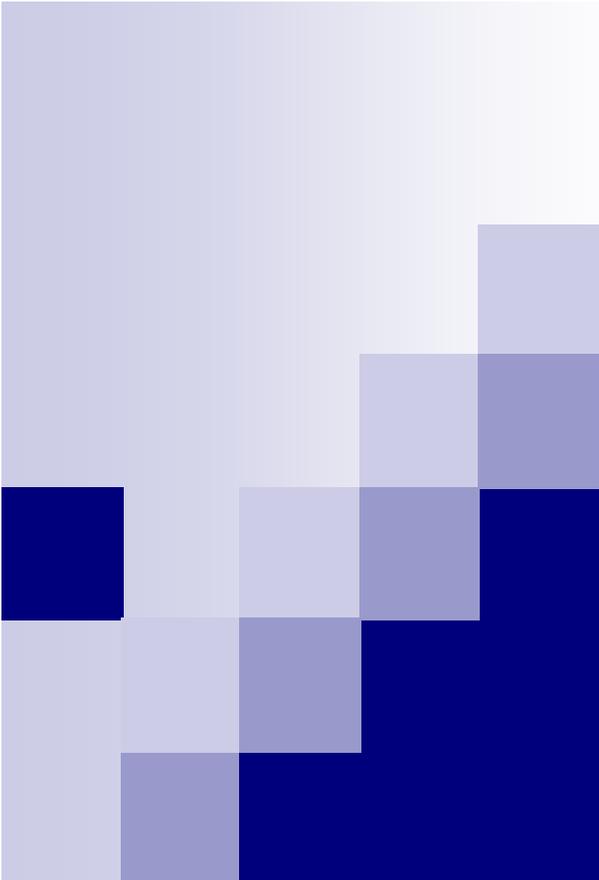
Save & Rollback

■ Rollback

- Throws away all changes back to the last time you Saved. You cannot “UNDO” a Rollback

■ Save

- None of the changes you make take effect until you save.



Demonstration



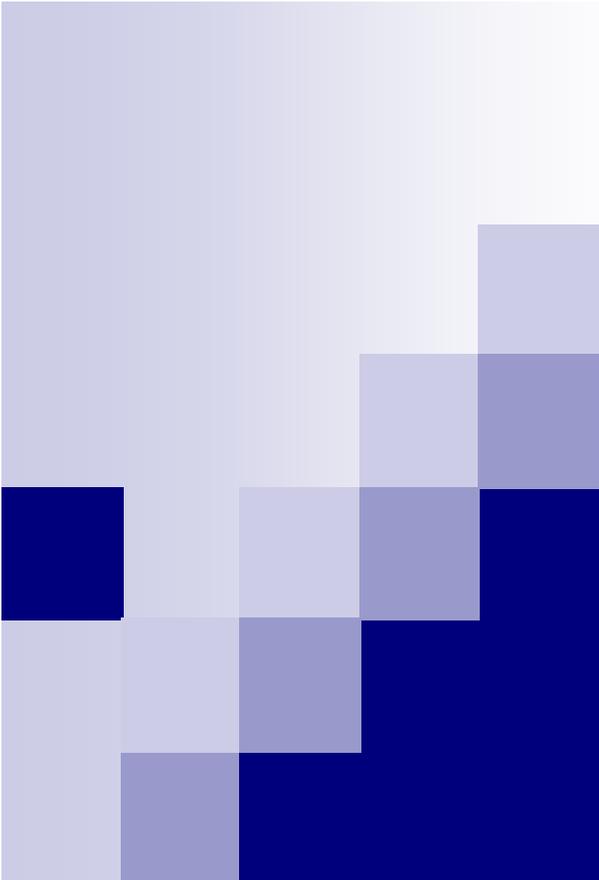
Recap

- Screening Groups OWN a Set of Monitors
- Signing on With a Screening Group Allows You Into New Areas of the Application
- When You Use Maintenance with a Screening Group, You Only Have Access to Monitors You Own
- Monitors are Not Physical Devices in AQS: Site – Pollutant measurement combos



Put it into practice

- Do exercise 2-1



Batch Process Overview



What Do You Mean By Batch Processing?

- Allows for Mass Entry of Data
- All Processing of the Data Happens Without Your Interaction
- The System Will Tell You When the Job Has Completed and Provide You With Reports at the End of Each Process



What Can Be Input by Batch?

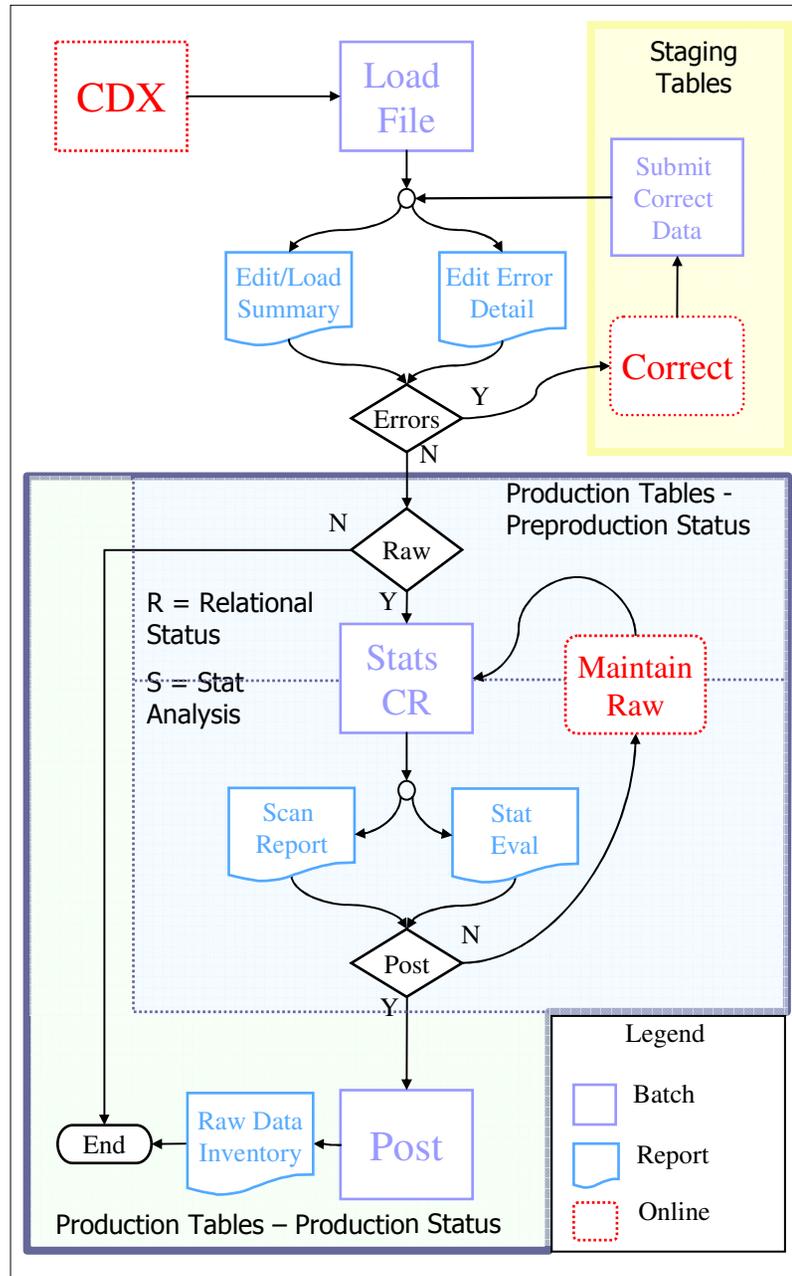
- Just About Everything
 - Site & Site Subordinate Info
 - Monitor & Monitor Subordinate Info
 - Raw Data (Regular & Composite)
 - Precision & Accuracy Data
 - Blanks Data



What Cannot Be Input by Batch

- Comments
 - Free-Format Text Describing Special Information for Sites, Monitors, Audits, and Raw Data Values
- Technical Systems Audits
- Event Definitions
- EPA Concurrence (For Regional People Only)

AQS Batch Data Input Flowchart



What's the Big Picture?

- **Collect Samples**
- **Format the Data**
- Send the Data so AQS Can See it (CDX)
- Load the Data (Includes Error Detection)
- Correct Any Errors & Reprocess
- Analyze and Approve Sample Data
- Make Available to Everyone



Happens Outside of AQS



Raw Data Only

Where Do I Start?

The screenshot shows a software window titled "Select Session Access (Information Management Group) Tribal Mode". It contains three radio button options: "Read Only User", "Screening Group Access" (which is selected), and "User Support Screening Group". Below these options, there is a text block: "**** AQS Basics Training Class schedule WHERE? RTP, NC WHEN? November 13 - 15, 2006 How do I register? Contact Jonathan". At the bottom of the window, it says "You have accessed AQSPROD. Raw data for 1993 to present" and "LOOK FOR ANSWERS TO 'Frequently Asked Questions' AT: <http://www.epa.gov/ttn/air/stair/aqs/aqsfaq.htm>. IF YOU NEED ASSISTANCE, PLEASE CALL THE EPA CALL CENTER AT 1-866-411-4EPA (1-866-411-4372) Hours: 6:00am- 6:30pm Eastern."

Overlaid on this window is a smaller dialog box titled "Select a Screening Group". It prompts the user to "Select a Screening Group for this session:" and displays a table with the following data:

Name	Type
OAOTEST	OTHER
EPA HEADQUARTERS	ADMIN
INFORMATION MANAGEMENT G	ADMIN
USER_SUPPORT	OTHER
IMPROVE	OTHER

An "OK" button is located at the bottom right of the dialog box.

Where To Go From Here

Action Help Session Admin Retrieval Maintenance Critical Rev Certification **Batch** Correct

The screenshot shows the 'Batch Process' window with several callouts:

- Files from CDX ready to Load:** A table with columns for File Date and Status.
- Files that You have Transferred to CDX:** A callout pointing to the 'Files from CDX ready to Load' table.
- List of All Batch Processes run for Screening Group:** A callout pointing to a table with columns for Session Status, Job Type, and File Name.
- Available Processes:** A callout pointing to the 'Batch Jobs' section.
- Available Reports:** A callout pointing to the 'Batch Reports' section.

Session Status	Job Type	File Name
ERROR	FILE	CDX_Test.txt
ERROR	FILE	Blank_subord_end_dates_cf.txt
COMPLETED	FILE	PEP_2006_1QA.txt
ERROR	FILE	PEP_2006_1Q.txt
ERROR	FILE	PEP_2005_Resubmit.txt
ERROR	ST_TABLES	

Batch Jobs

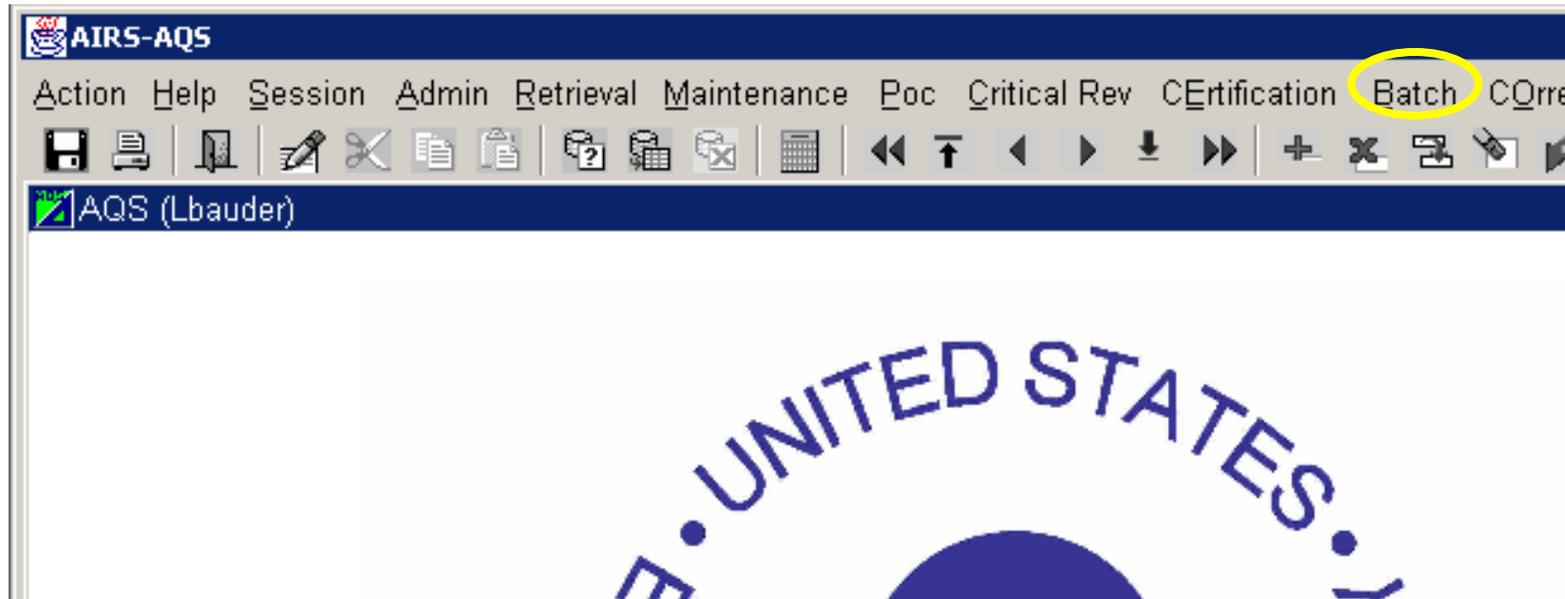
Load File Submit Correct Data Stats CR Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Batch Load: Use CDX to transfer data from their PC to the server

1. Start AQS, Login and select Screening Group.
2. Choose Batch Menu option



Batch Load: Use CDX to transfer data from their PC to server (cont.)

3. Click CDX button on batch process Screen (CDX is separate tool from AQS)

The screenshot shows the 'Batch Process (Lbauder) Tribal Mode' application window. It features a 'Files from CDX ready to Load' section with a table containing one row: File Date '20050103:14:36', File Name 'trib780pa.txt', and Status 'NOTIFY'. Below this is a 'Session Details' table with columns for Session Date, Oracle User Id, Session Status, Job Type, and File Name. The first row is highlighted in cyan and shows '20050105 14:10', 'BIB', 'COMPLETED', 'POST', and an empty File Name. To the right of this table are 'Refresh' and 'Cancel Session' buttons. At the bottom, there are two rows of buttons: 'Batch Jobs' (CDX, Load File, Submit Correct Data, Stats CR, Post) and 'Batch Reports' (Edit/Load Summary, Edit Error Details, Scan Report, Stat Evaluation, Raw Data Inventory). The 'CDX' button in the 'Batch Jobs' row is circled in yellow.

File Date	File Name	Status
20050103:14:36	trib780pa.txt	NOTIFY

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 14:10	BIB	COMPLETED	POST	
20050105 14:03	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Batch Jobs

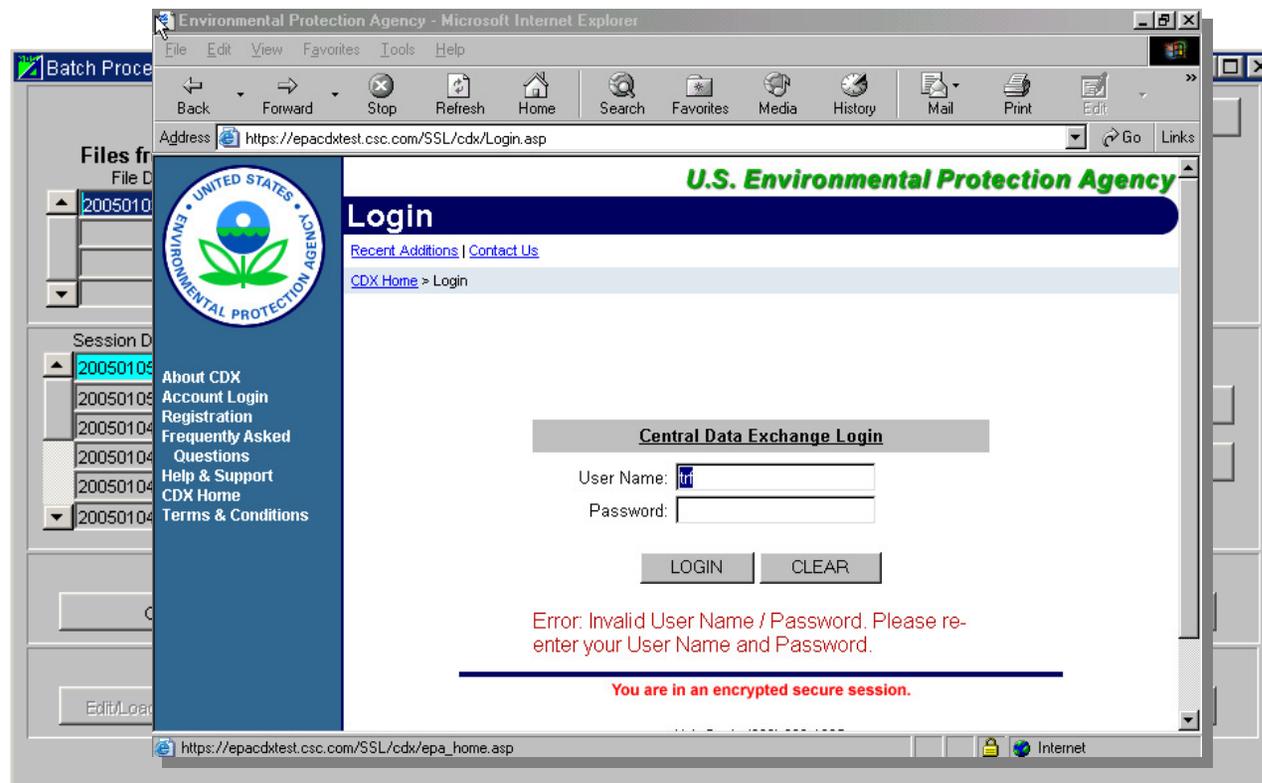
CDX Load File Submit Correct Data Stats CR Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Batch Load: Use CDX to transfer data from their PC to server (cont.)

4. Enter user name, CDX password and Login



Batch Load: Use CDX to transfer data from their PC to server (cont.)

5. Select AQS File Transfer

The screenshot shows a web browser window displaying the MyCDX interface. The browser's address bar shows the URL: <https://epacdxtest.csc.com/SSL/cdx/MyCdx.asp>. The page header includes the U.S. Environmental Protection Agency logo and the text "MyCDX". The user is logged in as "TRF".

The main content area is titled "Central Data Exchange - MyCDX" and displays the following information:

- Welcome, Ms. Teri R Tapp, None
- Last Login: March 5, 2003
- Registered Since: December 30, 2002
- Recertification Date: December 30, 2002
- CDX Registration Status: Active

Below this information, there is a message: "You have 0 new messages in your [Inbox](#)".

There are four buttons for account management:

- [Change System Password](#)
- [Edit Personal Information](#)
- [Edit Current Account Profiles](#)
- [Add New Employer Profile](#)

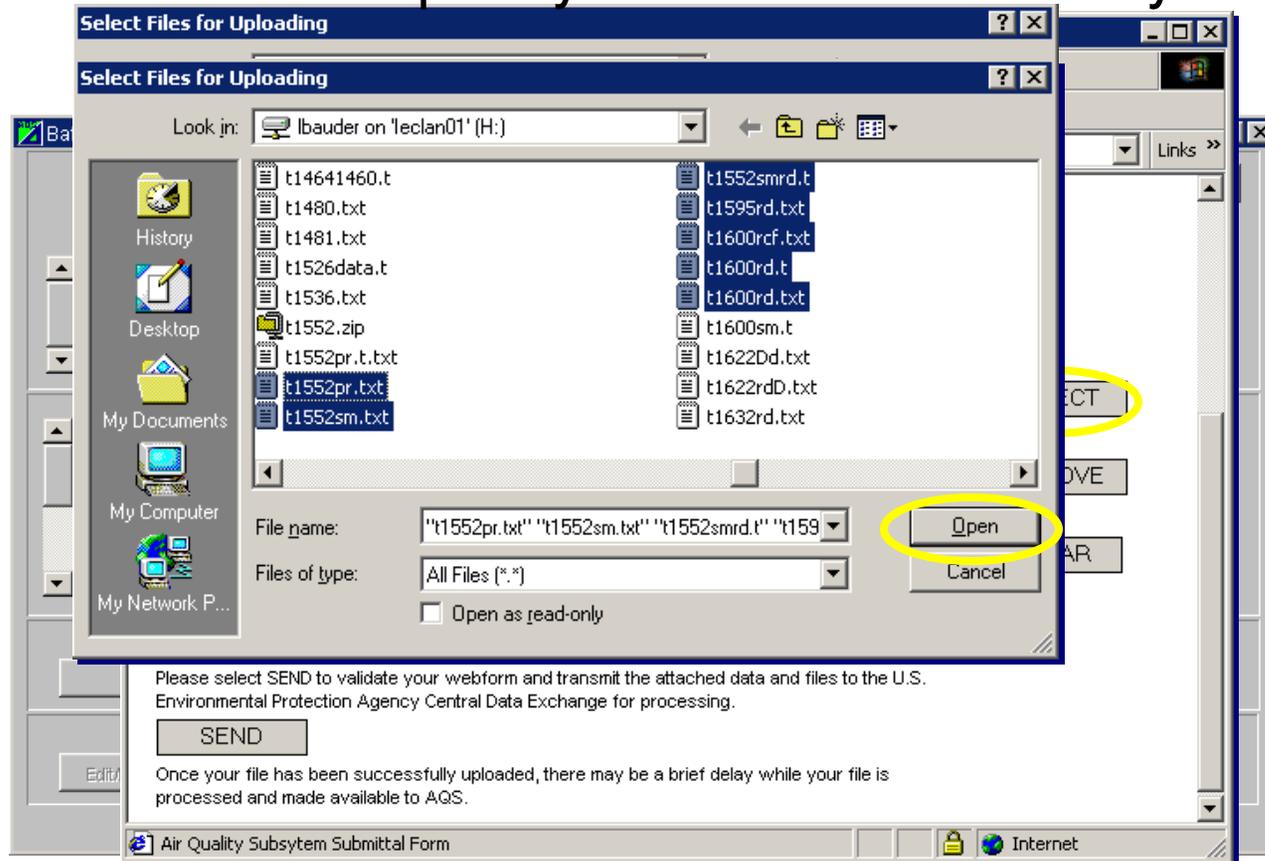
Under the heading "Available Account Profiles:", there is a list of profiles:

- [AQS: Air Quality System - File Transfer](#)

The "AQS: Air Quality System - File Transfer" link is circled in yellow.

Batch Load: Use CDX to transfer data from their PC to server (cont.)

6. Click on Select and Specify files to collect from your computer



Batch Load: Use CDX to transfer data from their PC to server (cont.)

7. Click on Send to de window.

The screenshot displays the 'Air Quality Subsystem Submittal Form' web application in Microsoft Internet Explorer. The page title is 'U.S. ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SUBSYSTEM SUBMITTAL FORM'. The address bar shows the URL: <https://epacdxtest.csc.com/ssl/aqs/showreply.asp>. The main content area displays a confirmation message: 'The following file(s) has been submitted. You will receive a message when the files have been successful processed.' Below this message is a table listing the submitted files and their sizes:

File Name	Size
T1600RD.T	7617428(bytes)
T1552SM.TXT	2372(bytes)
T1552SMRD.T	20789(bytes)
T1595RD.TXT	1549(bytes)
T1600RCF.TXT	5594(bytes)
T1552PR.TXT	3540(bytes)

Below the table, there is a link to 'Upload more files'. The page also includes instructions: 'Please select SEND to validate Environmental Protection Agency data. Once your file has been successful processed and made available to the AQS System, you may now access the web enabled AQS Application to validate and load the uploaded data into the AQS System. Please note that there may be a brief delay while your file is processed and made available to AQS.' A yellow circle highlights the 'SEND' button at the bottom of the page.

Batch Load: Use CDX to transfer data from their PC to server (cont.)

8. After receiving email notice of delivery, click on Refresh CDX to see the newly loaded files.

Files from CDX ready to Load:

File Date	File Name	Status
20031003:11:27	sitemt52.txt	NOTIFY
20031003:11:27	sitemt51.txt	NOTIFY
20031003:11:27	sitemt50.txt	NOTIFY

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 14:10	BIB	COMPLETED	POST	
20050105 14:03	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh

Cancel Session

Batch Jobs

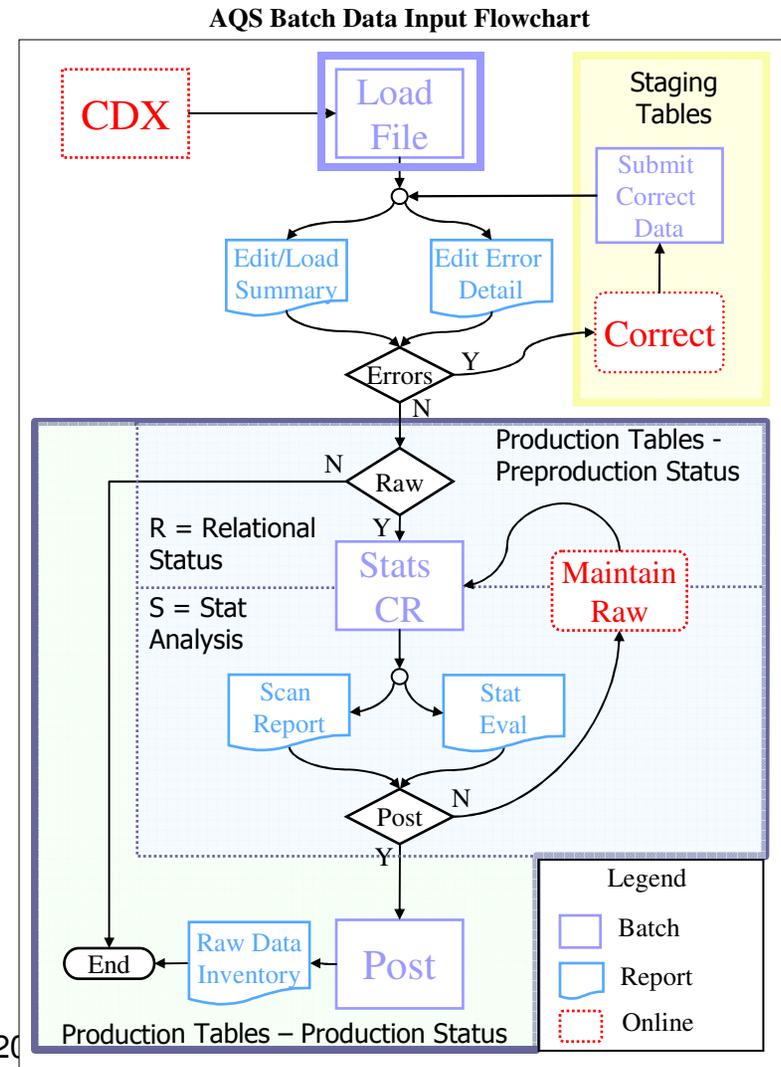
CDX Load File Submit Correct Data Stats CR Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

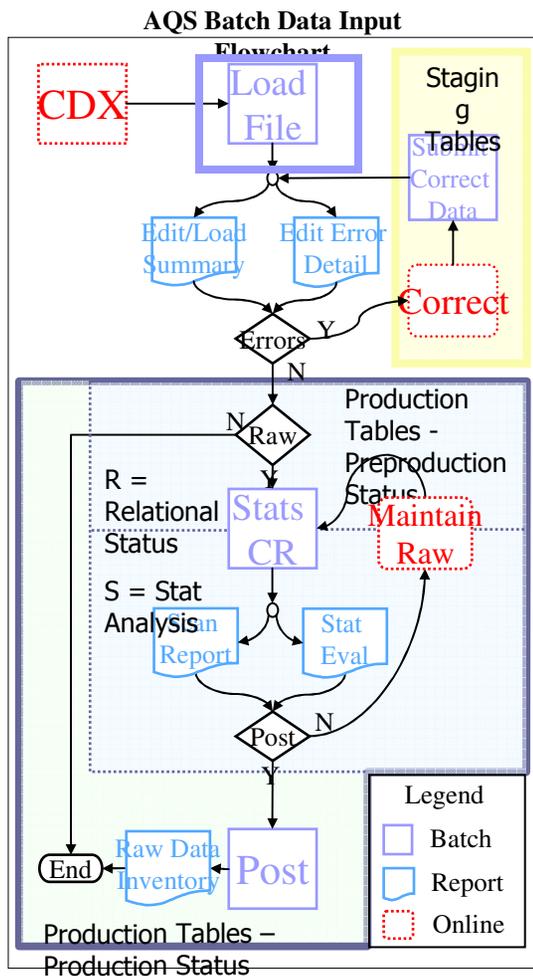
OK, We are finished with CDX, so it's on the server...

How do we load it?



Batch Load: Use Batch Load to Install Data

1. Select file (highlight) to load in CDX block
- 2.
3. Wait for email or Refresh in session block for ERROR/COMPLETE status.



File Date	File Name	Status
20050103 14:35	t1600rd.t	NOTIFY
20050104 13:37	sml.txt	NOTIFY

Batch Jobs

CDX **2** Load File Submit Correct Data Stats CR Post

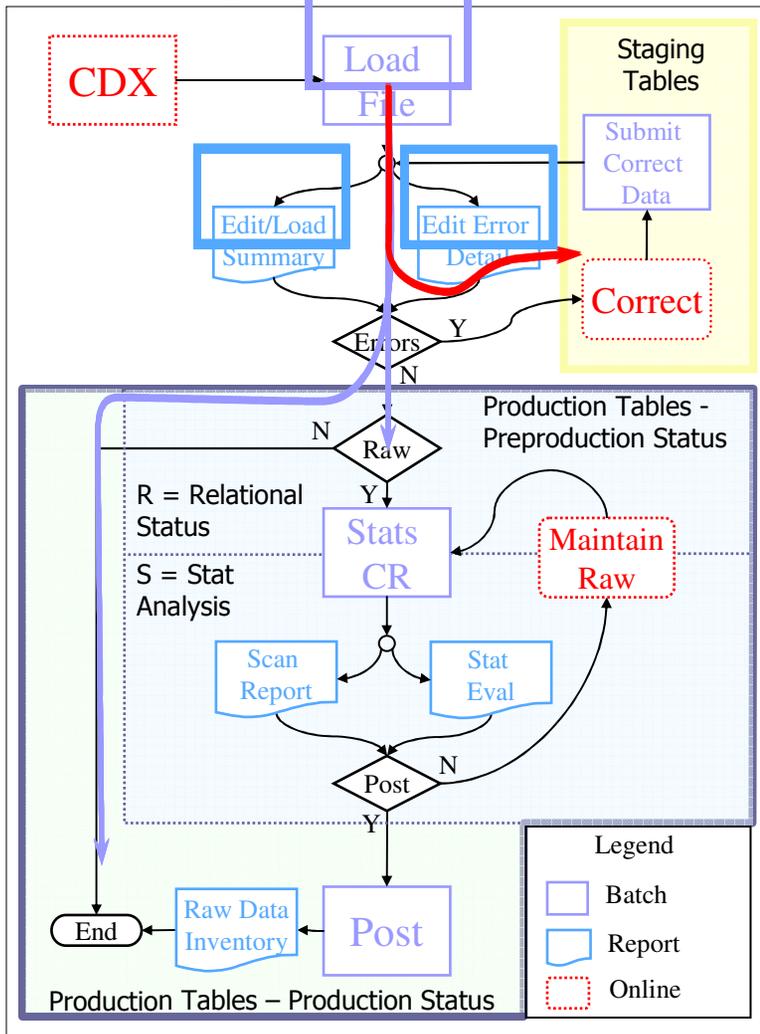
Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Date of File uploaded through CDX
Record: 1/3 ... <OSC>

Batch Load: Use Batch Load to Install Data

AQS Batch Data Input Flowchart



Possible Results of Load

- COMPLETED load { No data in Staging tables, Summary reports successes
- Load with ERROR { Data in Staging tables, Reports successes and failures



United States Environmental Protection Agency

Air Quality Subsystem

Edit Error Report

Aug. 28, 2003

Screening Group : LBAUDER User ID : BIB Session Date : Aug. 28, 2003 13:00

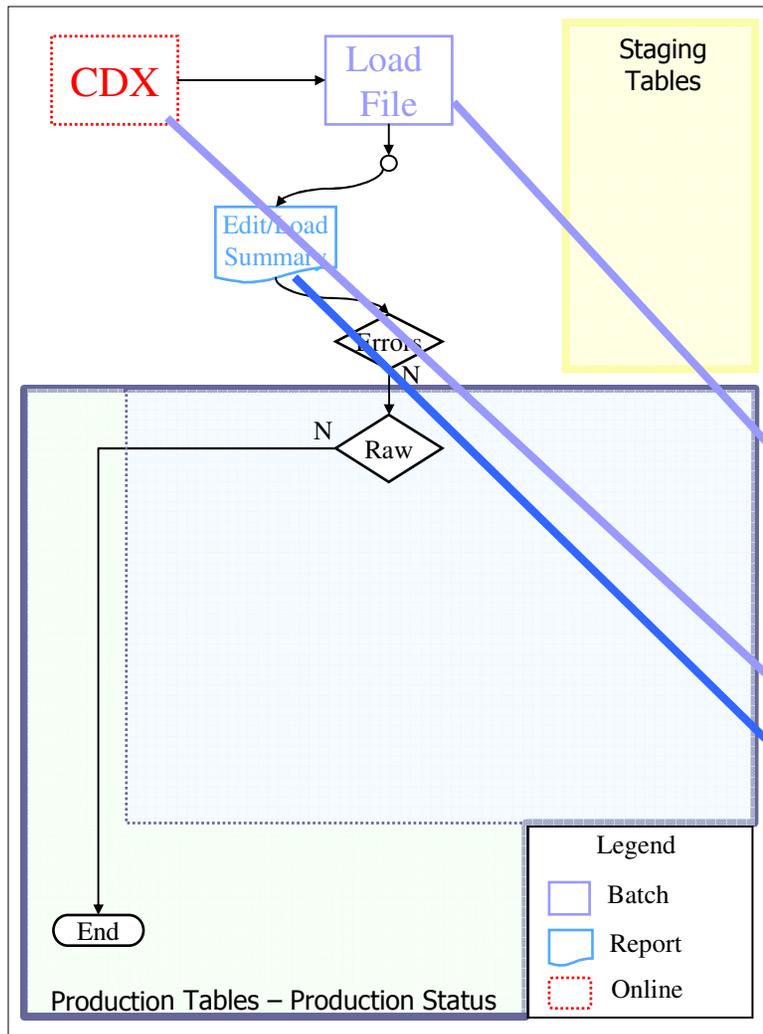
Site/Monitor : 01-097-9906-88101-1
 Table Name : RAW DATA
 Transaction : RD | 01 | 097 | 9906 | 88101 | 1 | 7 | 105 | 785 | 19600920 | 00:00 | 11 | 06 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Site/Monitor : 01-097-9906-88101-1
 Table Name : RAW DATA
 Transaction : RD | 01 | 097 | 9906 | 88101 | 1 | 7 | 105 | 785 | 19600926 | 00:00 | 7 | 06 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Batch Load: Use Batch Load to Install Non-Raw Data



Batch Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050103:14:36	trib780pa.txt	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 11:10	BIB	COMPLETED	POST	
20050105 14:00	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh

Cancel Session

Batch Jobs

CDX Load File Submit Correct Data Stats CR Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Recap

■ Steps:

- If There is No Raw Data and No Errors
 - CDX → Load
- If There is No Raw Data and Errors
 - CDX → Load → Correct → Submit Correct Data
- If There is Raw Data and No Errors
 - CDX → Load → Stat/CR → Post

Status = R

→ Status = S

→ Status = P



Caveats:

- A batch load job can end with a status of “WARNING”
- The only way to see the warning message is to look at the email job log.
- Example Warnings:
 - Urbanized Area Code replaced by Geospatial Lookup
- For PM 2.5 you must enter a primary monitor on the Maintain Site Form



Put it into practice

- Do exercise 2-2

Data Formats



Data Formats Overview

- 2 types supported
 - “Pipe-delimited” format
 - 19 different formats; one for each type of data supported through the system
 - “|”
 - Formats can be found at:
<http://www.epa.gov/ttn/airs/airsaqs/manuals/>
 - XML
 - AQS XML Schema definition can be found at
<http://www.exchangenetwork.net/exchanges/air/aqs.htm>

Pipe-Delimited Transaction Types

Maintain - Site Data (Information Management Group) Tribal Mode

Basic Site Data | Agency Roles | Tangent Roads | Open Paths | Comments

Local Code State County Site Id 0001 Status Ind P

AA AB AC

Required Optional

Site Latitude	+32.437222	Site Longitude	-86.472778		
Utm Zone Num	16	UTM Easting	549550	UTM Northing	3588840
LDP Coll Method	027	LDP Horiz Datum	UNKNOWN		
LDP Src Scale	0	LDP Accr Value	0		
LDP Vert Meas	64	LDP Vert Accr Value	0		
LDP Vert Method	000	LDP Vert Datum	UNKNOWN		
Street Address	KING ARTHUR TRAILER COURT, PRATTVILLE,AL				
City Code	62328	UA Code	0000	AOCR Code	002
Land Use Type	RESIDENTIAL	Loc Setting	SUBURBAN		
Site Estab Date	19740501	Time Zone	CENTRAL		

Create Monitor

Pipe-Delimited Transaction Types (Cont)

The screenshot shows a software window titled "Maintain - Monitor (Information Management Group) Tribal Mode". The window contains a form with various fields and a data grid at the bottom. Several callouts in thought bubbles point to specific fields or data points, identifying them with transaction types: MB (Monitor Basic), MD (Monitor Data), MF (Monitor Frequency), MK (Monitor Protocols), MA (Monitor Agency), MC (Monitor County), ME (Monitor Equipment), MG (Monitor Group), MH (Monitor Height), MI (Monitor Instrument), and MJ (Monitor Job).

The form fields include:

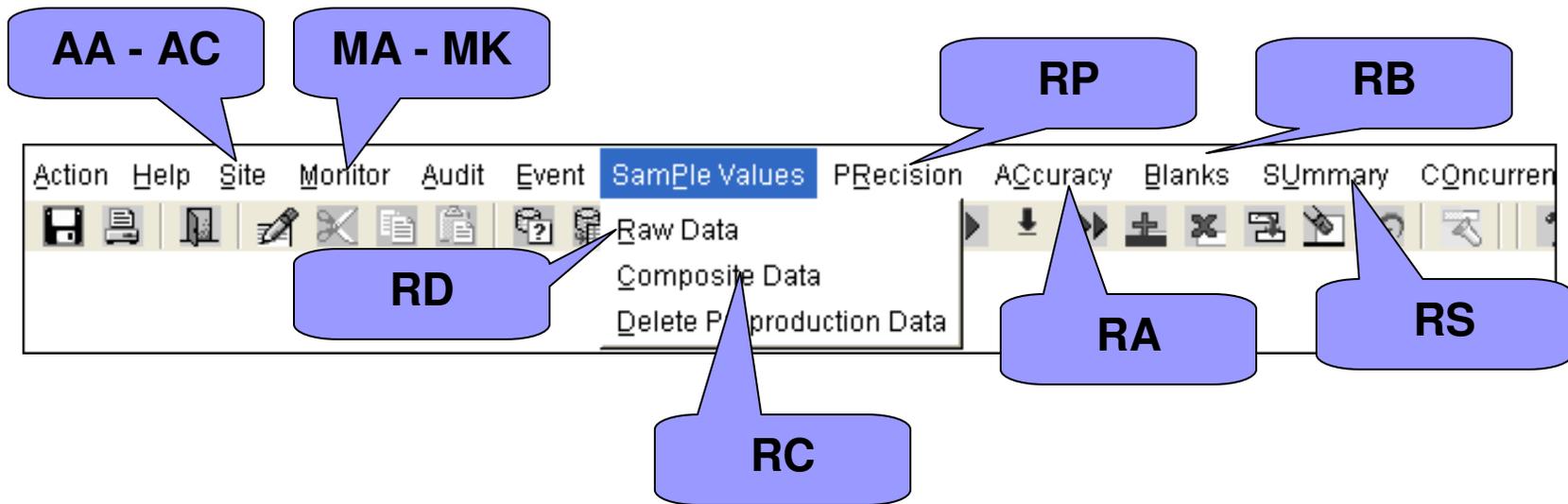
- Tribal Code: []
- State Code: [5]
- County: []
- Site Id: [002]
- Parameter Code: [4]
- POC: []
- Status: [P]
- Project Class: [03]
- Dominant Source: [AREA]
- Meas Scale: [REGIONAL SCALE]
- Open Path Num: []
- Probe Location: [TOP OF BUILDING]
- Probe Height: [4]
- Probe Hor Dist: [1]
- Probe Vert Dist: [1]
- Surrogate Ind: []
- Unrest Air Flow: [Y]
- Samp Res Time: []
- Last Samp Date: [20060630]
- Last Post Date: [20060907]
- Close Date: []

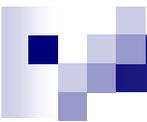
The data grid at the bottom contains the following pipe-delimited transaction:

```
MA|I|23|001|0002|44201|1|03|AREA|REGIONAL SCALE||TOP OF BUILDING|4|1|1||Y||2|||2399|
```

Buttons at the bottom of the window include "Check Completeness" and "Duplicate Monitor".

Pipe-Delimited Transaction Types (cont.)





Pipe-Delimited Transaction Common Fields

- Transaction Type – always the 1st column
- Action Indicator – always the 2nd column
 - I = INSERT
 - U = UPDATE
 - D = DELETE
- State Code – always the 3rd column
- County Code – always the 4th column
- Site ID – always the 5th column



Pipe-Delimited vs XML Example

- AQS Site ID: 01-001-9999
- Pollutant Measured: Ozone
- POC (assigned as part of the monitor ID): 1
- Does this value already exist in the system? NO
- How long did it take to form sample (the duration): 1 hour
- What kind of instrument was used? Dasibi 1008-AH
- When was the sample collected? June 10, 2006

(continued on next slide)



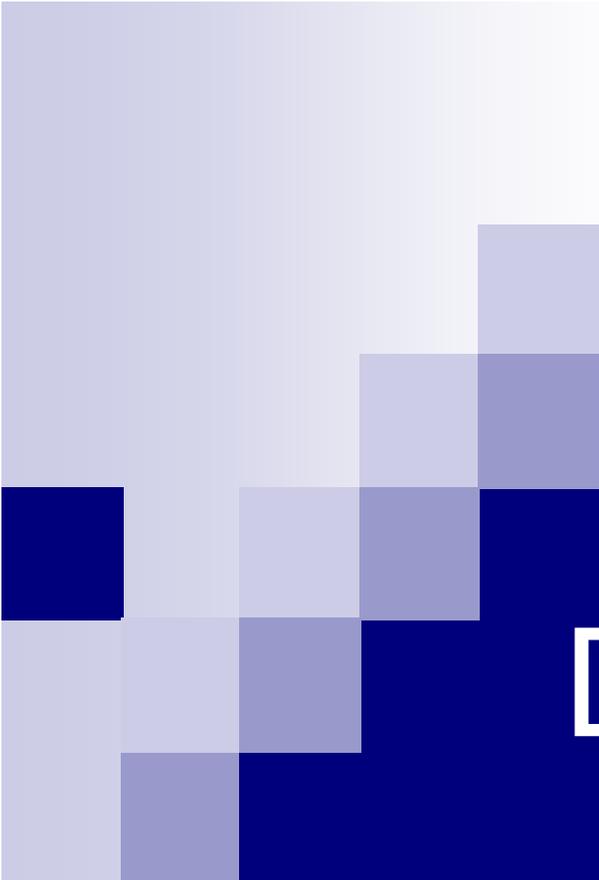
Pipe-Delimited vs XML Example (cont.)

- What time did sample begin (local standard time): 1:00 PM
- Sample Concentration: 0.050 parts per million
- Other qualifiers that you want to apply to data? No
- Would you like to specify an alternate Minimum Detection Limit for this sampler? NO
- Would you like to specify an uncertainty value with this sample? NO



XML Format

- As you can see, XML looks like HTML, but with some changes:
 - The HTML standard defines a fixed set of “tags” that define the data content and formatting.
 - XML allows you to create your own tags, with the meanings that you define.
- XML Tradeoffs:
 - XML files are “self describing”
 - XML files are bigger (100 X bigger, but



Data Formats



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 - AQS XML Schema definition can be found at
<http://www.exchangenetwork.net/exchanges/air/aqs.htm>

Pipe-Delimited Transaction Types

Maintain - Site Data (Information Management Group) Tribal Mode

Basic Site Data | Agency Roles | Tangent Roads | Open Paths | Comments

Local Code State County Site Id 0001 Status Ind P

AA AB AC

Required Optional

Site Latitude	+32.437222	Site Longitude	-86.472778		
Utm Zone Num	16	UTM Easting	549550	UTM Northing	3588840
LDP Coll Method	027	LDP Horiz Datum	UNKNOWN		
LDP Src Scale	0	LDP Accr Value	0		
LDP Vert Meas	64	LDP Vert Accr Value	0		
LDP Vert Method	000	LDP Vert Datum	UNKNOWN		
Street Address	KING ARTHUR TRAILER COURT, PRATTVILLE,AL				
City Code	62328	UA Code	0000	AQCR Code	002
Land Use Type	RESIDENTIAL	Loc Setting	SUBURBAN		
Site Estab Date	19740501	Time Zone	CENTRAL		

Create Monitor

Pipe-Delimited Transaction Types (Cont)

The screenshot shows a software window titled "Maintain - Monitor (Information Management Group) Tribal Mode". The window contains a form with various fields and a data grid at the bottom. Callouts in thought bubbles identify specific fields with two-letter codes:

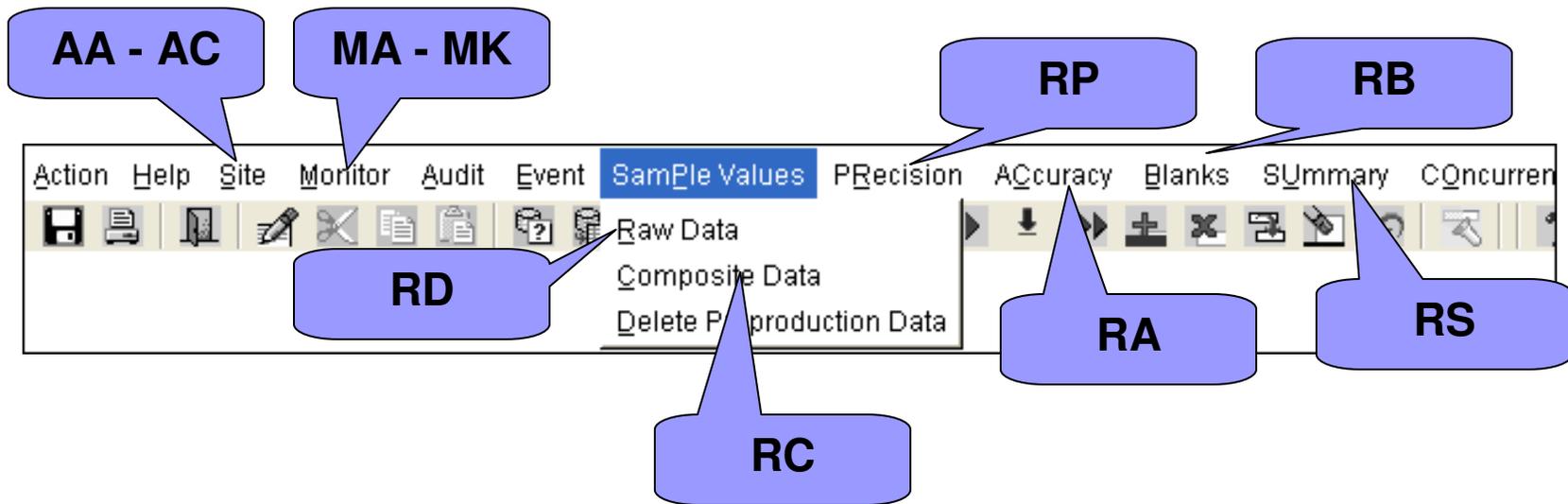
- MB**: Monitor Basic (tab)
- MD**: Monitor Description (tab)
- MA**: Tribal Code
- MC**: State Code
- ME**: County
- MA**: Site Id
- MG**: Parameter Code
- MH**: POC
- MI**: Status
- MJ**: Collocation (tab)
- MK**: Monitor Protocols (note)

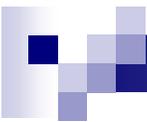
The data grid at the bottom contains the following pipe-delimited text:

```
MA|I|23|001|0002|44201|1|03|AREA|REGIONAL SCALE||TOP OF BUILDING|4|1|1||Y||2|||2399|
```

Buttons at the bottom of the window include "Check Completeness" and "Duplicate Monitor".

Pipe-Delimited Transaction Types (cont.)





Pipe-Delimited Transaction Common Fields

- Transaction Type – always the 1st column
- Action Indicator – always the 2nd column
 - I = INSERT
 - U = UPDATE
 - D = DELETE
- State Code – always the 3rd column
- County Code – always the 4th column
- Site ID – always the 5th column



Pipe-Delimited vs XML Example

- AQS Site ID: 01-001-9999
- Pollutant Measured: Ozone
- POC (assigned as part of the monitor ID): 1
- Does this value already exist in the system? NO
- How long did it take to form sample (the duration): 1 hour
- What kind of instrument was used? Dasibi 1008-AH
- When was the sample collected? June 10, 2006

(continued on next slide)



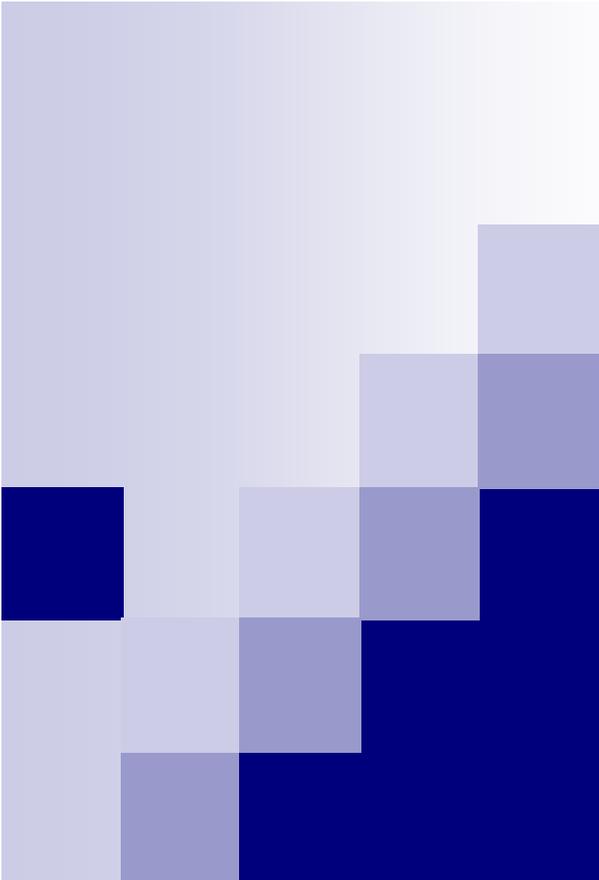
Pipe-Delimited vs XML Example (cont.)

- What time did sample begin (local standard time): 1:00 PM
- Sample Concentration: 0.050 parts per million
- Other qualifiers that you want to apply to data? No
- Would you like to specify an alternate Minimum Detection Limit for this sampler? NO
- Would you like to specify an uncertainty value with this sample? NO



XML Format

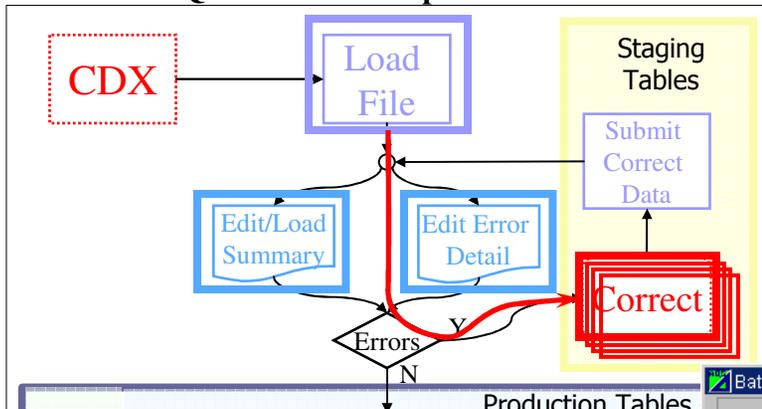
- As you can see, XML looks like HTML, but with some changes:
 - The HTML standard defines a fixed set of “tags” that define the data content and formatting.
 - XML allows you to create your own tags, with the meanings that you define.
- XML Tradeoffs:
 - XML files are “self describing”
 - XML files are bigger (100 X bigger, but



Correct Function

Batch load: Error Process

AQS Batch Data Input Flowchart



Result of Load

- Load with ERROR
- Reports successes and failures

Production Tables
Preproduction Stat

United States
Environmental Protection Agency

Air Quality Subsystem
Edit/Load Summary Report

Jun. 5, 2002

Production Tables – Production Sta

Air Quality Subsystem
Edit Error Report

Aug. 28, 2003

Screening Group : LBAUDER User ID : BIB Session Date : Aug. 28, 2003 13:00

Site/Monitor : 01-097-9906-88101-1

Table Name : RAW DATA

Transaction : RD | | 01 | 097 | 9906 | 88101 | 1 | 7 | 105 | 785 | 19600926 | 0000 | 11 | | 6 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Site/Monitor : 01-097-9906-88101-1

Table Name : RAW DATA

Transaction : RD | | 01 | 097 | 9906 | 88101 | 1 | 7 | 105 | 785 | 19600926 | 0000 | 7 | | 6 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Monitor ID (State, County, Site, Parameter, POC) not in database	-20405

Posts	Total
1	1
1	1
1	1
1	2
3	6
1	1
0	60
8	72

Raw Data Inventory

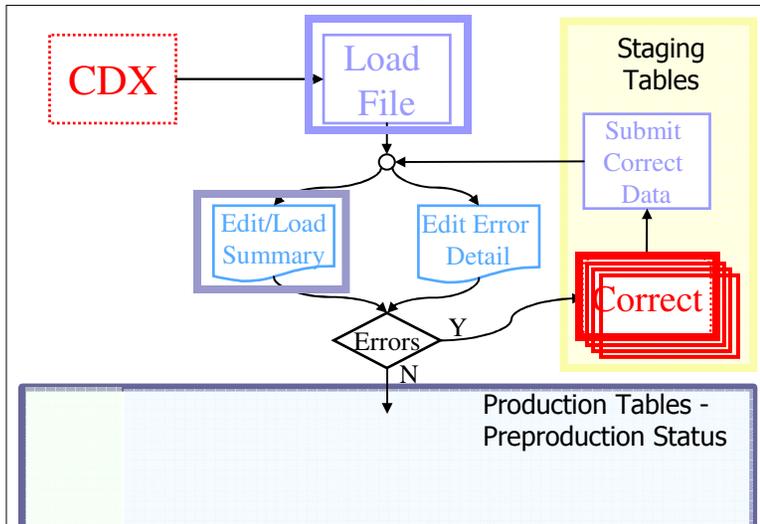


Correct Process

- CORRECT is a Type of On-Line Editor That Works Against the “Staging Tables”
- Staging Tables are in the format of the Pipe-Delimited Transactions and are Not the “Real” Table (Because There is an Error that Prevents Them From Getting to the “Real” Table)

Batch load: Correct Forms

AQS Batch Data Input Flowchart



There is a form for correcting every type of data input record

EPA United States Environmental Protection Agency

Air Quality Subsystem
Edit/Load Summary Report

Jun. 5, 2002

Screening Group Name : INSTRUCTOR1

Transaction Type	Transaction Type Description	Errors	Exclusions	Edits	Posts	Total
AA	SITE BASIC	0	0	0	1	1
MA	MONITOR BASIC	0	0	0	1	1
MB	MONITOR SAMPLING PERIODS	0	0	0	1	1
MC	MONITOR TYPE INFORMATION	1	0	0	1	2
MD	MONITOR AGENCY ROLE	3	0	0	3	6
ME	MONITORING OBJECTIVE INFORMATION	0	0	0	1	1
RD	RAW DATA	12	0	48	0	60
Totals		16	0	48	8	72

Batch load: Using Correct Forms

The screenshot shows the AIRS-AQS software interface. The main window is titled "Correct - Monitor Types (Lbauder)". It contains a data table with columns: County Code, Site Id, Parameter Code, POC, Ac Ind, Type Begin Date, Type End Date, and Exclusion Ind. The "Type Begin Date" column has the value "19700101" highlighted. A callout labeled "3" points to this value. Below the main table is an "Error Details" section with columns: Column Name, Error Code, and Error Message. The "Error Code" column has the value "-20775" highlighted, and the "Error Message" column contains the text "monitor_type_begin_date not within valid sampl period." A callout labeled "2" points to this error message. The software's menu bar includes "Action", "Help", "Site Data", "Monitor Data", "Raw", and "Precision". A callout labeled "4" points to the "Save" icon in the toolbar. A callout labeled "1" points to the "Execute Query" icon in the toolbar. A callout labeled "3" also points to the "Exclusion Ind" column header.

Save

Execute Query
This will load all of this type of data in the Staging tables for your Screening Group.
If you want to limit selection you must put in selection values **before** the execute query.

Read the error message(s)
Error messages are the same as in the error details report
Many chose to go straight to the Correct screens rather than run a report.
The column name is sometimes informative.

Find, Analyze and fix the data
Fixing the data often requires knowledge of the nature of the data and may require going back to data sources.

Exclude unfixed data
Excluding unfixed data will keep it from raising error flags during load.

County Code	Site Id	Parameter Code	POC	Ac Ind	Type Begin Date	Type End Date	Exclusion Ind
141	9954	81102	2	1	19700101		<input type="checkbox"/>

Column Name	Error Code	Error Message
MULTIPLE COLUMNS	-20775	monitor_type_begin_date not within valid sampl period.

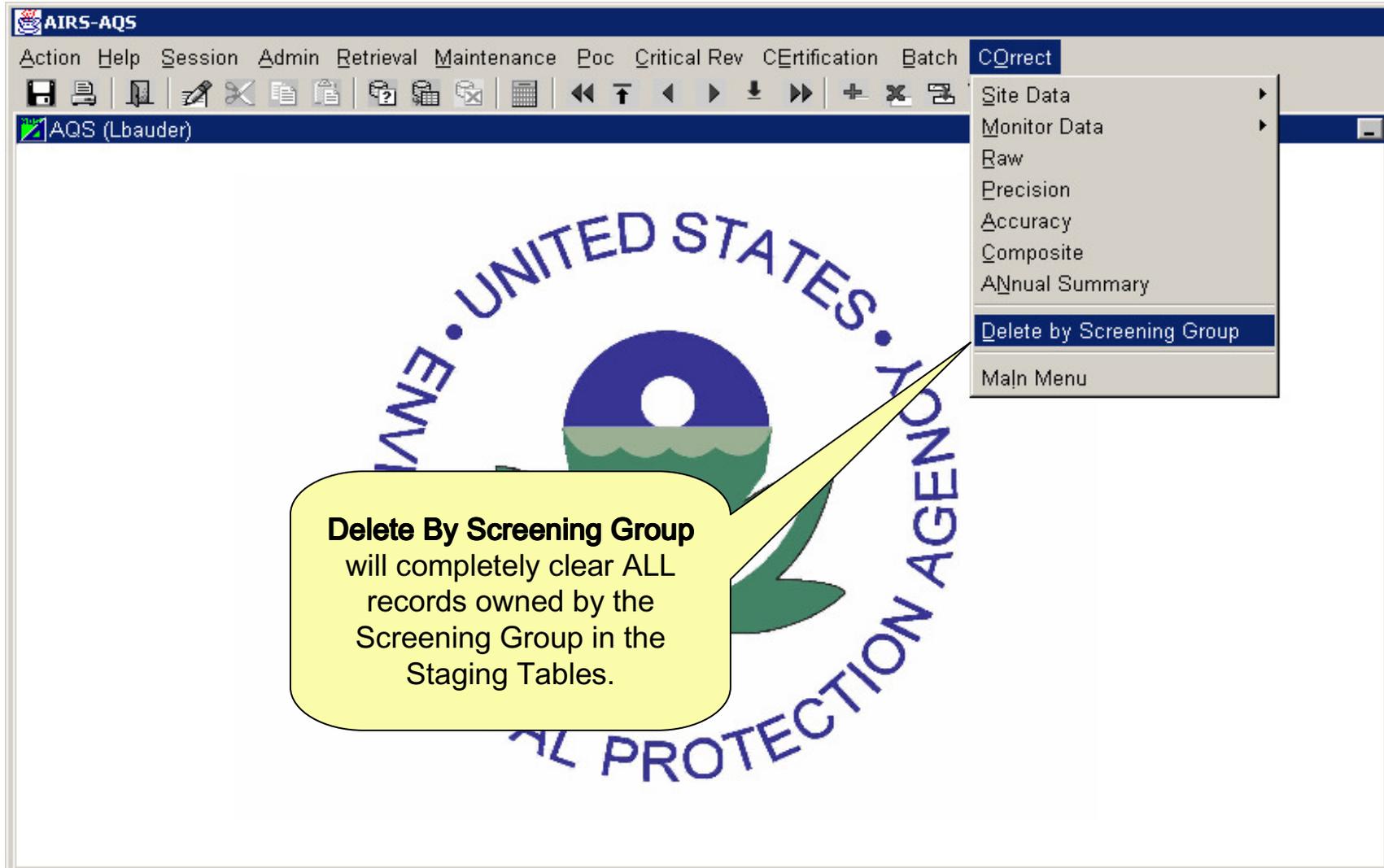
Batch load: Using Correct Forms

Deleting Data (cont.)

The screenshot shows the AQS software interface. The menu bar includes: Action, Help, Site Data, Monitor Data, Raw, Precision, Accuracy, Blanks, Composite, Annual Summary, Batch, Main Menu. The toolbar contains various icons for file operations and data manipulation. The main window title is 'Correct - Monitor Types (Lbauder) Tribal Mode'. The data table has columns: Tribal Ind, Tribal Code, Site Id, Param Code, Type Begin Date, Type End Date, Exclusion Ind, and Exclusion Date. A yellow callout box points to a highlighted row in the table, stating: 'The highlighted record can be deleted from the form. The record will be deleted'. A dialog box titled 'Forms' is open, displaying a warning icon and the text: 'This will delete all selected records. Do you want to continue?' with 'Yes' and 'No' buttons. A large orange question mark is overlaid on the dialog box. A yellow callout box points to the 'Delete All Selected' button, stating: 'All selected records will be deleted. The records will be deleted from the Staging Table database when the button is clicked.' Below the table is an error log section with columns: Column Name, Error Code, and Error Message.

Batch load: Using Correct Forms

Deleting Data (cont.)



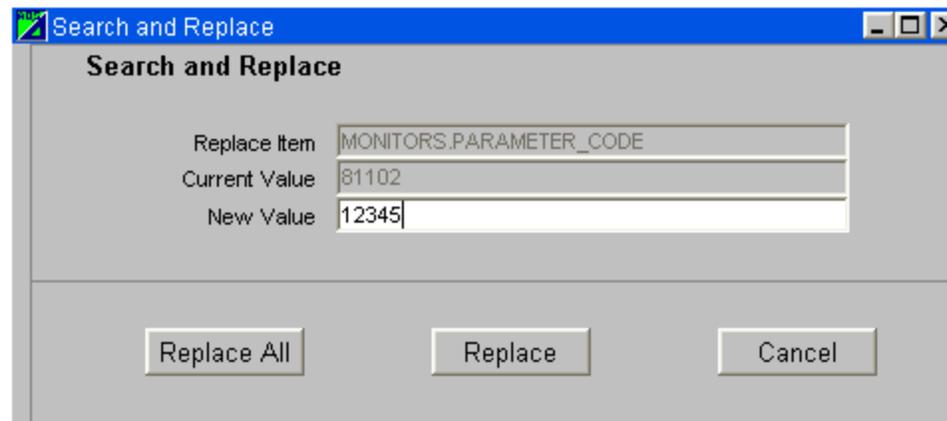
The screenshot shows the AIRS-AQS software interface. The menu bar includes Action, Help, Session, Admin, Retrieval, Maintenance, Poc, Critical Rev, Certification, Batch, and Correct. The 'Correct' menu is open, showing options: Site Data, Monitor Data, Raw, Precision, Accuracy, Composite, Annual Summary, Delete by Screening Group (highlighted), and Main Menu. A callout box points to the 'Delete by Screening Group' option.

Delete By Screening Group
will completely clear ALL records owned by the Screening Group in the Staging Tables.

Search & Replace



- Not “Search & Replace” as you may know it!
- Replaces ALL Queried Values in a given column Regardless of the “Current Value”



Search and Replace

Replace Item: MONITORS.PARAMETER_CODE

Current Value: 81102

New Value: 12345

Buttons: Replace All, Replace, Cancel

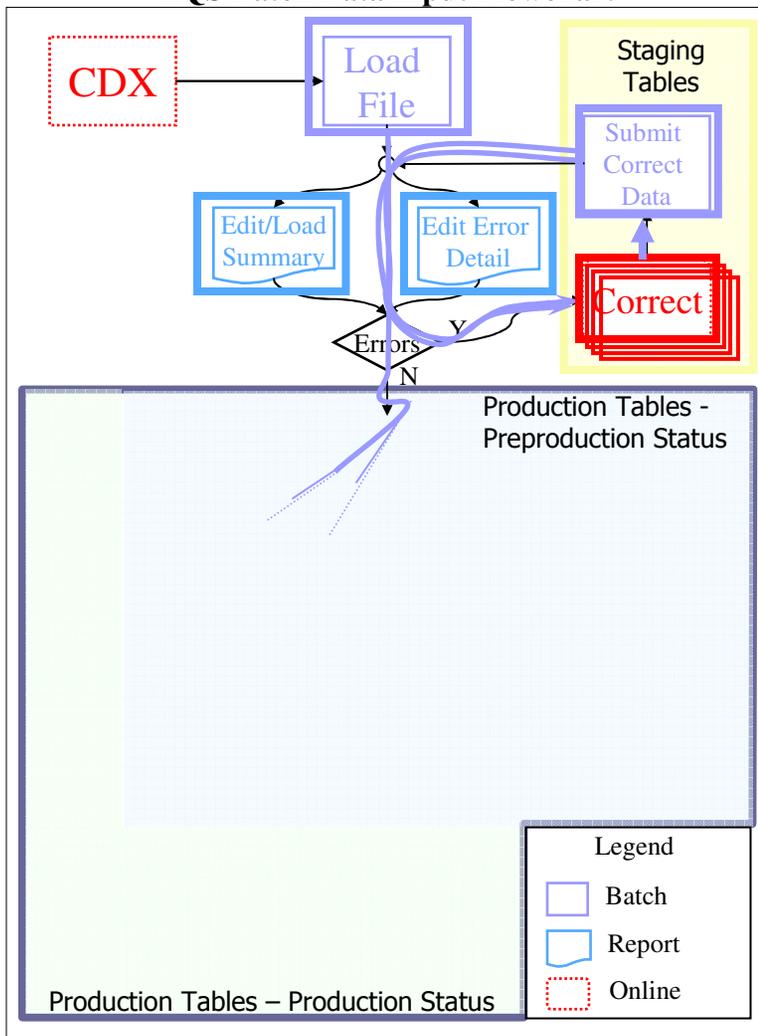


Correct Features

- New transactions may be entered using Correct forms
- After making changes/additions on Correct screen, **SAVE** changes
- “Delete All Selected” button will delete according to “Execute Query” selection criteria for the form; it will ignore subsequent changes.
- Can use “Delete by screening group” to completely eliminate all records in staging tables for your screening group

Batch load: Submit Correct Data

AQS Batch Data Input Flowchart



- Once data is corrected
 - Submit correct data
 - Recheck for errors
 - Correct residual errors

Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
50103:14:36	trib780pa.txt	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
50105 14:10	BIB	COMPLETED	POST	
50105 14:03	BIB	COMPLETED	CRST	
50104 20:51	BIB	COMPLETED	POST	
50104 20:44	BIB	COMPLETED	CRST	
50104 20:06	BIB	ERROR	ST_TABLES	
50104 20:01	BIB	COMPLETED	POST	

Refresh

Cancel Session

Batch Jobs

CDX Load File **Submit Correct Data** Stats CR Post

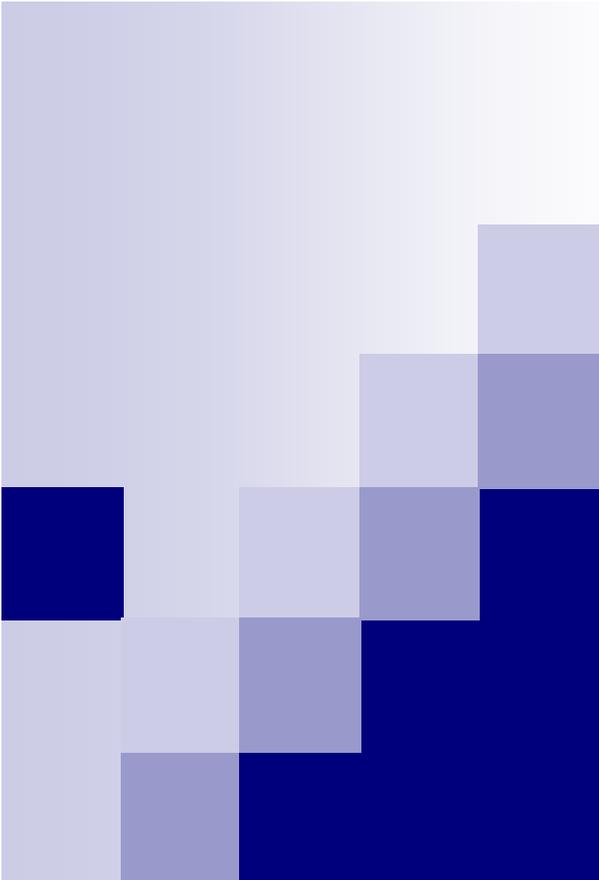
Batch Reports

Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory



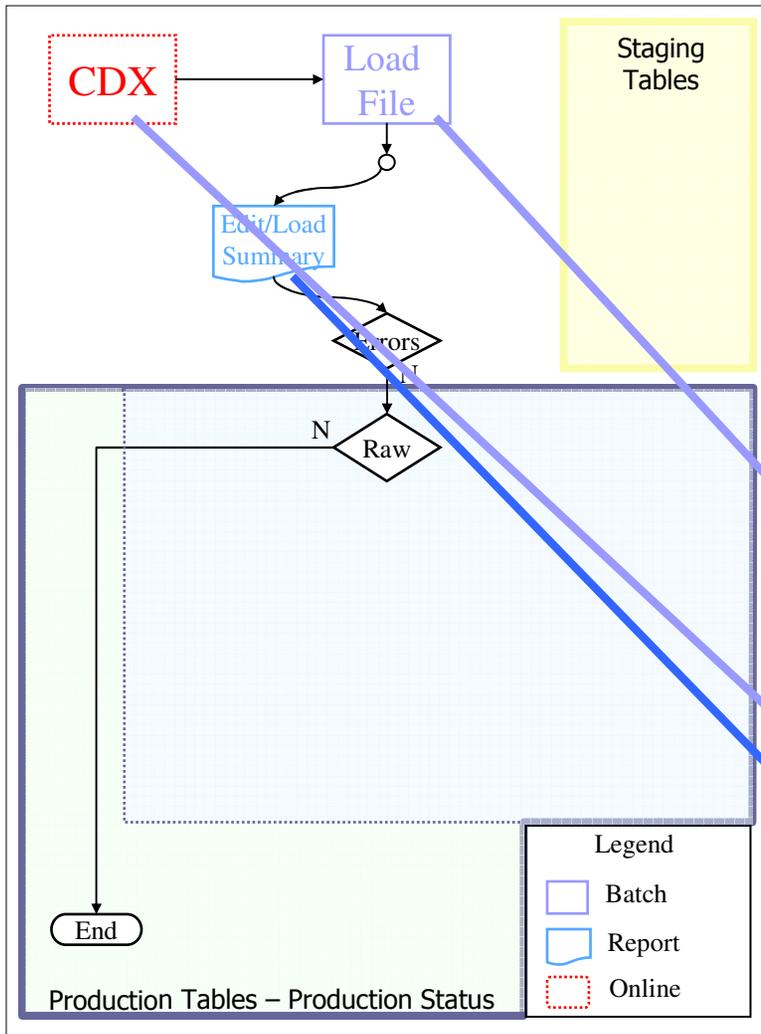
Put it into practice

- Exercise 2.3



Post Data

Batch Load: Use Batch Load to Install Site/monitor Data



Batch Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050103:14:36	trib780pa.txt	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 11:10	BIB	COMPLETED	POST	
20050105 14:00	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh

Cancel Session

Batch Jobs

CDX Load File Submit Correct Data Stats CR Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Batch: Stat CR and Post

Batch Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050103:14:36	trib780pa.txt	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 14:10	BIB	COMPLETED	POST	
20050105 14:03	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh Cancel Session

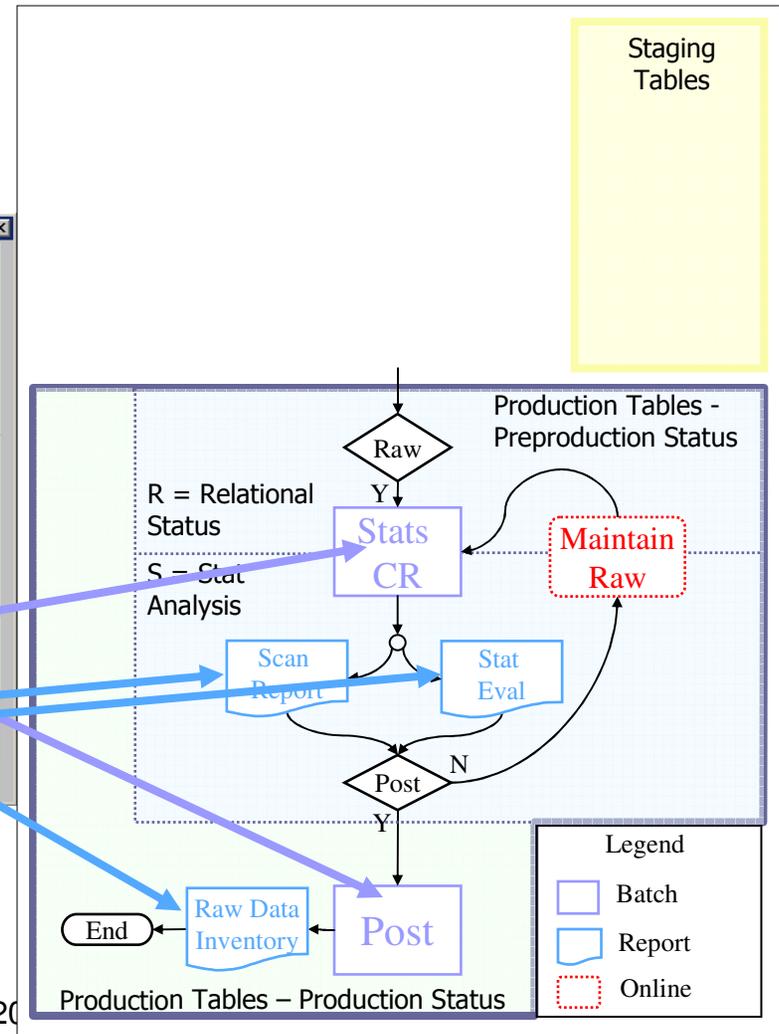
Batch Jobs

CDX Load File Submit Correct Data Stat CR Post

Batch Reports

Edit Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

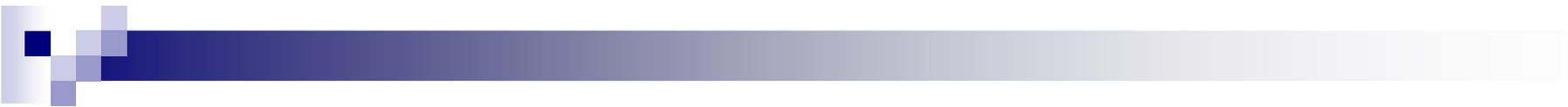
AQS Batch Data Input Flowchart





Stat CR

- **Stat CR = Statistical Critical Review**
 - Evaluation of data to discover possible but unlikely data
Results available in Scan and Stat Evaluation Reports
- **Scan Report**
 - Provides information on maximum values and validity flags for raw data
- **Stat Evaluation Report**
 - Compares pre-production data to existing production data using Shewhart test, Patterns test, and Gap test
- Additional information found in
<http://www.epa.gov/ttn/airs/aqs/softw/AQSUserGuide.pdf>



Critical Reviews

- Once data posted, accessible by public. Stat CR and Post activities help flag data anomalies prior to release
- Real errors that fit with rest of data not captured
- Anomalies found are not necessarily errors
- Stat CR and Post must always be run when raw data is added to or changed in database

Batch: Stat CR

- Simply push button, wait for completion (e-mail/refresh for notification)

Batch Process (Lbauder) Tribal Mode

Files from CDX ready to Load:

File Date	File Name	Status
20050103:14:36	trib780pa.txt	NOTIFY

Refresh CDX

Session Date	Oracle User Id	Session Status	Job Type	File Name
20050105 14:10	BIB	COMPLETED	POST	
20050105 14:03	BIB	COMPLETED	CRST	
20050104 20:51	BIB	COMPLETED	POST	
20050104 20:44	BIB	COMPLETED	CRST	
20050104 20:06	BIB	ERROR	ST_TABLES	
20050104 20:01	BIB	COMPLETED	POST	

Refresh

Cancel Session

Batch Jobs

CDX Load File Submit Correct Data **Stats CR** Post

Batch Reports

Edit/Load Summary Edit Error Details Scan Report Stat Evaluation Raw Data Inventory

Batch: Statistical Evaluation Report



Air Quality Subsystem STATISTICAL EVALUATION REPORT

Screening Group Name LBAUDER

Monitor Id	Date:Time	Error	Above Gap Cnt
48-141-9954-12128- 2	Apr. 01, 1999 :00	Fails Shewhart test.	
48-141-9954-12128- 2	Apr. 06, 1999 :00	Value exceeds relative maximum level defined for parameter.	

- Only records that fail a test are reported

Batch: Scan Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
SCAN REPORT (AMP120)

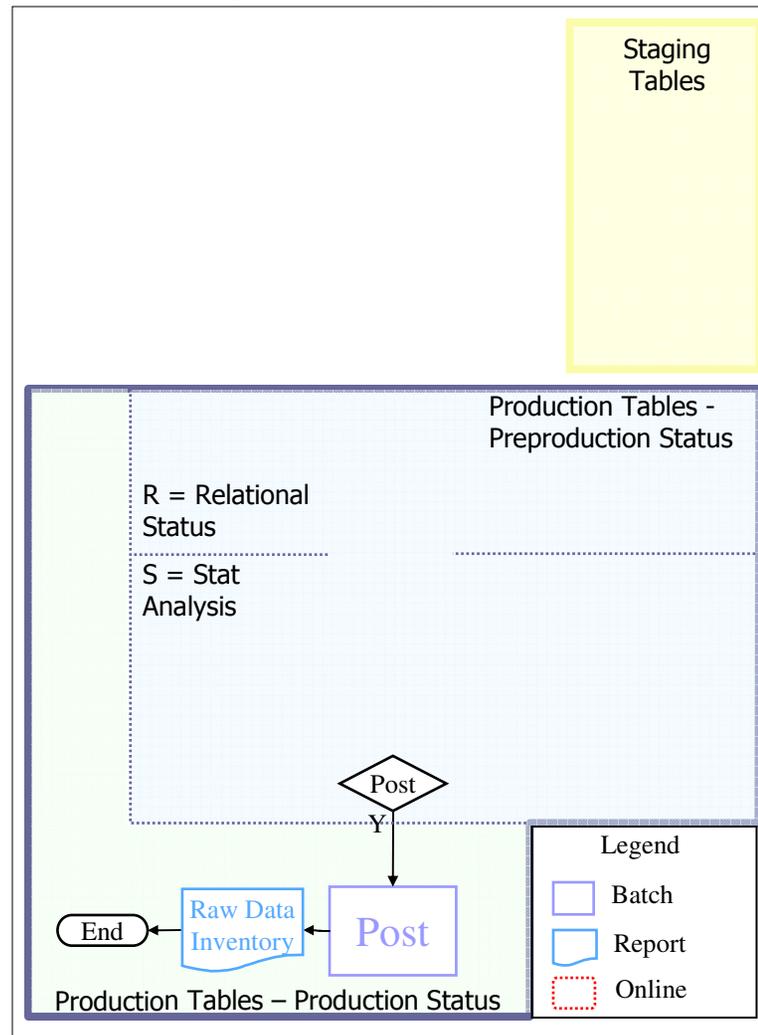
Monitor Id	Unit	D	Year	Q	Hist Max	Date-Time	1st Max	Date-Time	Loc	V F	2nd Max	Date-Time	Loc	V F	3rd Max	Date-Time
15-001-9991-42401-1	007	1	2003	-2			.839	04/07:05			.724	04/02:16				
19-153-9955-16822-1	078	7	2002	-1			.03	01/20:00			.03	02/01:00				
19-153-9955-16822-1	078	7	2002	-2			.03	04/02:00			.03	04/14:00				
19-153-9955-16822-1	078	7	2002	-3			.03	07/07:00			.03	07/19:00				
19-153-9955-16822-1	078	7	2002	-4			.03	10/23:00			.03	11/04:00				
19-153-9955-16822-3	078	7	2002	-2			.03	06/01:00			.03	06/13:00				
19-153-9955-16822-3	078	7	2002	-3			.03	07/07:00			.03	07/19:00				
19-153-9955-16822-4	078	7	2002	-1			.03	01/20:00			.03	02/01:00				
19-153-9955-16822-4	078	7	2002	-2			.03	04/02:00			.03	04/14:00				
19-153-9955-16822-4	078	7	2002	-3			.03	07/07:00			.03	07/19:00				
19-153-9955-16822-4	078	7	2002	-4			.03	10/23:00			.03	11/04:00				
48-141-9954-12128-2	001	7	1999	-2	104	1999/01/10:00	* 200	04/06:00			104	04/10:00	D			54

- Report flags - *

Batch: Post

- Post is final process in batch update process
- One last chance to verify that data is ready for the world
- Raw Data Inventory Report is available after Post batch job runs

AQS Batch Data Input Flowchart



Batch: Post form

Monitor ID	Year - Quarter	CR Exists	Stats Exist
TT-780-9003-42401-3	2003-3	Y	Y
TT-780-9003-42401-3	2003-4	Y	Y

Action	Std Samp	Samp	Comp Samp	Comparison	Error	Desc	Value
U	1						

Total Gap	Value Above Gap	Num Below Gap	2003-07-16	20030716 00:00
89	1	.102		

Post button on batch form calls-up new form to use to review data

Batch: Post Form Raw Data Tab

Review Statistical Data (Lbauder) Tribal Mode

Raw Overview | **Raw Data**

Monitor ID: TT-780-9003-42401-3

Raw Data												
Samp Begin Date	Std Sample Value	Rptd Sample Value	Data Code	Unit	Ind	Exist	Method Code	Unit	Duration Code	Coll Freq Code	Composite Type	Alt Mdl
20031001 00:00	.3	.3		007	U	Y	009	007	1			
20031001 07:00	.3	.3		007	U		009	007	1			

Qualifier Details		
Qualifier Code	Qualifier Type	Qualifier Desc
P	EX	ROOFING OPERATIONS

Raw Data display allows verification that incidents that “qualify” (explain) unusual value are entered before data is posted to public. Qualifier information cannot be entered in this form

Batch: Post Form, Raw Data

Monitor ID	Year - Quarter	CR Exists	Stats Exist
TT-780-9003-42401-3	2003-3	Y	Y
TT-780-9003-42401-3	2003-4	Y	Y

Action	Std Samp	Samp	Comp Samp	Comparison	Error
Ind	Value	Begin Date	Value	Date	Desc
U	1	20030716 05:00	.148	20030810 09:00	Value >> 3-Yr Historical Max

Total Gap	Value Above Gap	Num Below Gap	Error Date	Statistical Error
89	1	.102	20030701 00:00	Fails Gap test.
			20030716 00:00	Fails Dixon Ratio test.

Remember, though aberrations look like “errors” they may be perfectly acceptable data values for posting

Batch: Post Form, Raw Data

Monitor ID: TT-780-9003-42401-3

Samp Begin Date	Std Sample Value	Rptd Sample Value	Null Data Code	Unit	Action Details Ind	Exist	Method Code	Unit	Duration Code	Coll Freq Code	Composite Type	Alt Mdl
20031001 00:00	.3	.3		007	U	Y	009	007	1			
20031001 07:00	.3	.3										

Posting

Screening Group LBAUDER records are scheduled for posting.

OK

Qualifier Code	Qualifier Type	Qualifier Desc
P	EX	ROOFING OPERATIONS

Return to Batch Processing | Post Data to Production

Remember, ALL records belonging to screening group are posted. It doesn't matter who loaded data

Batch: Raw Data Inventory Report

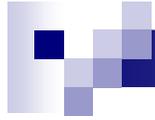


Air Quality Subsystem Raw Data Inventory Report

Aug. 28, 2003

Screening Group: LBAUDER

Monitor Id	Duration	Year-Mon	Inserts	Updates	Deletes
19-153-9955-16822-1	24 HOURS	2002-1	1	0	0
19-153-9955-16822-1	24 HOURS	2002-2	3	0	0
19-153-9955-16822-1	24 HOURS	2002-3	2	0	0
19-153-9955-16822-1	24 HOURS	2002-4	3	0	0
19-153-9955-16822-1	24 HOURS	2002-5	2	0	0
19-153-9955-16822-1	24 HOURS	2002-6	2	0	0
19-153-9955-16822-1	24 HOURS	2002-7	3	0	0
19-153-9955-16822-1	24 HOURS	2002-8	1	0	0
19-153-9955-16822-1	24 HOURS	2002-9	3	0	0
19-153-9955-16822-1	24 HOURS	2002-10	2	0	0
19-153-9955-16822-1	24 HOURS	2002-11	3	0	0
19-153-9955-16822-1	24 HOURS	2002-12	2	0	0
19-153-9955-16822-3	24 HOURS	2002-6	2	0	0
19-153-9955-16822-3	24 HOURS	2002-7	3	0	0
19-153-9955-16822-4	24 HOURS	2002-1	1	0	0
19-153-9955-16822-4	24 HOURS	2002-2	3	0	0



Put it into practice

- Exercise 2.4